PART B

SOLAR - GEOPHYSICAL DATA

ISSUED
MAY 1958

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F 165
PART B

NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

Issued
31 May 1958

SOLAR - GEOPHYSICAL DATA

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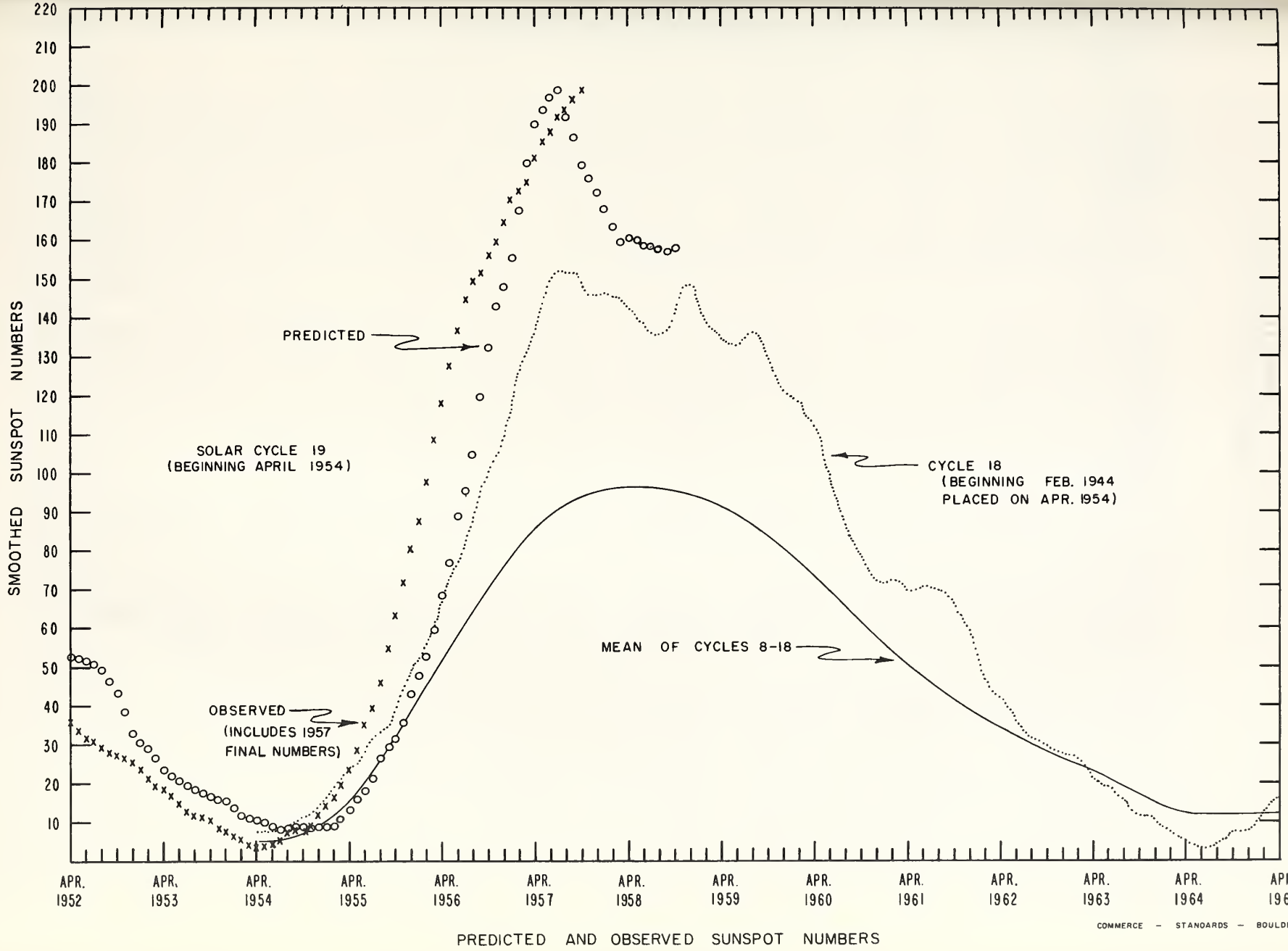
INTRODUCTION

The descriptive text is published quarterly or whenever context of the report is changed. The last issue in which the text appeared was CRPL-F164 Part B issued April 1958.

DAILY SOLAR INDICES

Mar. 1958	American Relative Sunspot Numbers $R_{A'}$
1	120
2	114
3	159
4	186
5	214
6	212
7	145
8	182
9	173
10	171
11	162
12	163
13	166
14	200
15	166
16	169
17	171
18	151
19	168
20	144
21	160
22	166
23	191
24	208
25	189
26	233
27	243
28	237
29	287
30	278
31	268
Mean:	187.0

Apr. 1958	Zürich Provisional Relative Sunspot Numbers R_Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux
1	290	331
2	292	326
3	245	302
4	245	295
5	244	290
6	212	289
7	246	283
8	246	272
9	204	250
10	197	244
11	159	216
12	140	196
13	127	179
14	96	177
15	99	188
16	108	197
17	147	207
18	168	213
19	191	221
20	192	226
21	218	229
22	212	237
23	201	235
24	181	244
25	206	248
26	182	245
27	190	247
28	198	258
29	207	255
30	208	265
Mean:	195.0	245.5



PREDICTED AND OBSERVED SUNSPOT NUMBERS

CALCIUM PLAGE AND SUNSPOT REGIONS

APRIL 1958

CMP Apr. 1958	Lat	McMath Plage Number	Return of Region	Calcium Plage Data			Sunspot Data		
				CMP Values			CMP Values		
				Area	Int.	History, Age	Area	Count	History
01.7	N26	4492	4443	400	2	ℓ — ℓ 3			
01.8	N06	4487	New	700	3	b ⌐ ℓ 1	360	6	b ⌐ ℓ
02.4	S14	4480	New*	5500	3	ℓ — ℓ 1	1160	10	ℓ ¬ ℓ
02.9	N25	4481	4443	1700	3	ℓ — ℓ 3	390	1	ℓ — ℓ
04.6	N32	4484	4444	9000	3	ℓ — ℓ 2	860	14	ℓ ¬ ℓ
04.7	N18	4485	4446	3400	2.5	ℓ └ ℓ 4	100	6	ℓ ∨ ℓ
04.9	S21	4483	New*	5700	3	ℓ — ℓ 1	950	26	ℓ ∧ ℓ
06.3	N26	4488	4446	1500	2.5	ℓ ¬ d 4	210	4	ℓ ¬ d
06.9	S26	4489	4447	300	1	ℓ \ d 6			
07.5	N12	4490	4449	4000	2.5	ℓ ⌐ ℓ 4	1140	11	ℓ ⌐ ℓ
08.1	S24	4494	4458	1000	2	ℓ └ ℓ 2	(230)	(5)	ℓ ^ d
08.9	S12	4496	4458	800	2	ℓ ⌐ ℓ 2	50	2	b — d
09.8	N17	4493	* *	8500	3	ℓ — ℓ 2	1270	8	ℓ ∧ ℓ
11.5	N44	4495	4464	3000	3	ℓ └ ℓ 2	(90)	(2)	ℓ — d
12.8	S16	4497	New	1500	2.5	ℓ ⌐ ℓ 1	50	4	b ⌐ ℓ
13.5	N45	4503	New	700	1.5	b — d 1			
13.9	N12	4498	4456	4800	3.5	ℓ ∨ ℓ 2	20	2	ℓ ^^ ℓ
14 5	S08	4500	4472	800	1.5	ℓ \ d 2			
15.8	S05	4501	New	500	1.5	ℓ — ℓ 1	60	4	ℓ — d
15.9	S15	4504	4459	400	1.5	ℓ — ℓ 4	90	4	b — d
16.7	S25	4515	New+	200	2	b — ℓ 1	(70)	(2)	b — ℓ
17.7	S27	4509	4459	800	1	ℓ \ d 4			
18.1	S10	4505	4466	200	1	ℓ — ℓ 2			
18.3	S23	4516	New	300	2	b ⌐ ℓ 1			
18.5	N38	4502	4460?	1800	3	ℓ — ℓ 2	90	3	ℓ ⋀ d
18.9	N18	4506	4465	4000	3.5	ℓ — ℓ 2	410	13	ℓ ^ ℓ
21.1	S21	4508	New	8000	3.5	ℓ ⌐ ℓ 1	1620	4	ℓ ⌐ ℓ
21.1	N13	4511	New	400	2	ℓ ⌐ ℓ 1	20	1	b — d
21.1	N25	4507	4469	8000	3	ℓ ⌐ ℓ 2	280	3	ℓ ^ d
21.7	N41	4510	4469	1400	3	ℓ — ℓ 2	120	2	ℓ \ d
22.7	N08	4513	New	500	2	ℓ — ℓ 1			
23.6	N14	4514	New	4000	3	ℓ └ ℓ 1	380	6	ℓ — ℓ
24.2	S24	4518	4479	300	1	ℓ └ ℓ 2	60	3	b — d
25.9	N09	4519	New	5200	3.5	ℓ — ℓ 1	910	19	ℓ ^ ℓ
26.7	S20	4520	4478	4000	2.5	ℓ ¬ ℓ 3			
27.1	N10	4522	New	1200	2	ℓ \ d 1	(20)	(1)	ℓ — d
27.7	N19	4521	New	1600	2	ℓ — ℓ 1	220	3	ℓ └ ℓ
28.6	N13	4523	4487	500	2	ℓ └ ℓ 2			
29 3	N14	4532	4487	300	2	ℓ — ℓ 2			
29.4	S15	4524	4480	4000	3	ℓ └ ℓ 2?	500	2	ℓ — ℓ
30.0	N08	4526	4487	700	2	ℓ \ d 2	(20)	(2)	ℓ — d
30.0	N25	4525	4481	1500	2	ℓ — ℓ 4	10	1	ℓ ⌐ ℓ

*4480 and 4483 lie at E and W extremities of last rotation's 4445; they behave, however, more like new regions.

**4453 and 4452

+In position of last rotation's 4459.

CORONAL LINE EMISSION INDICES

In addition to indices previously published by month.

CMP 1957	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
30 Sep													98	121		
9 Oct									97	148			102	143		
17 Oct									137	250	48	100	130	179	67	110
18 Oct									210	314	19	25	178	306	27	48
23 Oct	151	210			90	137										
30 Oct											43	70				
31 Oct	145	193	90	130	120	143	61	160	163	230			187	263		
1 Nov	105	117	54	86	176	270	42	127								
5 Nov									114	132			105	158		
11 Nov									154	260	8	22	188	285	12	18
12 Nov									69	88	22	45	81	106	14	35
13 Nov			33	52			30	60	54a	76a			73a	118a		
14 Nov	162	254			135	158										
17 Nov									153	176	75	115	121	165	34	99
18 Nov											58	75			40	50
19 Nov	160	183			102	156										
20 Nov									31a	43a	33a	50a	69a	85a	46a	60a
21 Nov									52	66	36	65	127	168	21	53
22 Nov									72	86						
25 Nov	86	100	13	22	113	164	17	31								
26 Nov	42a	58a	26a	45a	55a	96a	51a	90a								
27 Nov	59a	94a			57a	72a										
30 Nov									125	184	29	42	91	108	21	45
1 Dec	95	128	58	130	90	108	28	40	126	196	23	38	77	84	13	20
2 Dec			48	75			22	40								
4 Dec	43a	54a	36a	48a	47a	77a	23a	40a								
5 Dec	71	88	21	47	116	176	18	48			29	38			16	27
6 Dec	75	91			77	105			144	191	14	17	119	126	17	49
7 Dec									130	147	10	25	145	168	18	30
13 Dec											14	20			19	40
14 Dec	105	152	15	36	97.	120	34	51			26	50			16	36

* = yellow line observed
a = index computed from low weight data

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CORONAL LINE EMISSION INDICES

In addition to indices previously published by month.

CMP 1957	North East Quadrant (observed 7 days earlier)				South East Quadrant (observed 7 days earlier)				South West Quadrant (observed 7 days later)				North West Quadrant (observed 7 days later)			
	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1	G_6	G_1	R_6	R_1
15 Dec	116	149	16	32	85	115	31	48			45	75			19	35
18 Dec									65	100	26	40	86	117	19	36
19 Dec			28	43			31	63								
20 Dec	132*	193	22	35	112	177	40	70								
21 Dec			21	50			27	50								
23 Dec									102	150			101	159		
25 Dec											25	39			48	59
27 Dec			20	35			32	70								
28 Dec			27	35			44	92								
29 Dec			34	55			45	80								
1958																
1 Jan	41	48	20	25	76	107	17	25								
6 Jan	138	160			119	168										
8 Jan	96	122	29	65			16	33								

* = yellow line observed
a = index computed from low weight data

Note: Coronal data for April will appear in the next issue
An equipment breakdown prevented reduction of data
in time for this issue.

SOLAR FLARES

APRIL 1958

OBSERVATORY	DATE Apr. 1958	OBSERVED UNIVERSAL TIME START	OBSERVED UNIVERSAL TIME END	OBSERVED UNIVERSAL TIME MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
MITAKA	01	0120 E	0125 D		S08	W40	4476	5 D	1	1	0120	.89	1.14	1.68	96	Slow S-SWF
MITAKA	01	0212 E	0218		S13	W38	4476	6 D	1	1	0215	2.78	3.44	2.58	96	
MITAKA	01	0433 E	0456		S15	W39	4476	23 D	1	1	0442	2.78	3.44	2.22	96	
NIZAMIAH	01	0445	0453	0447	S09	W68	4476	8	1	3	0447	1.22	3.13	1.80		
MITAKA	01	0451 E	0456 D		S05	W65	4476	5 D	1	1	0453	2.78	4.50	2.45	96	
CAPRI G	01	0722 E	0812 D		S14	W51	4476	50 D	1	3			4.00			
AROSA	01	0728	0738		S14	W50	4476	10	1							
CAPRI G	01	0750 E	0812 D		N23	E48	4488	22 D	1	3			4.00			
AROSA	01	0759	0808		N22	E50	4488	9	1							
UCCLE	01	0815 E	0829		S13	W40	4476	14 D	1	4						
UCCLE	01	0815 E	0830 D		N19	E84	4493	15 D	1	4						
UCCLE	01	0817	0829		N20	E53	4488	12	1	4	0820	.70	14.00			
UCCLE	01	0830	0834	0830	S15	W50	4476	4	1	3	0830	1.20	2.20			
UCCLE	01	0836	0840	0838	N35	E40	4484	4	1	3	0838	1.20	2.50			
CAPRI G	01	0935	0947 D		S19	E40	4483	12 D	1	3			2.00			
CAPRI G	01	0938 E	1002 D		S09	W76	4476	24 D	1	3			2.00			
CAPRI G	01	0955	1000		S12	W46	4476	5	1	3			5.00			
UCCLE	01	0956	1003	0958	S10	W54	4476	7	1&	5	0958	4.00	6.00			
AROSA	01	0958	1000 D		S09	W53	4476	2 D	1							
UCCLE	01	1018	1028	1020	N37	E38	4484	10	1	4	1020	1.50	2.10			
CAPRI G	01	1025 E	1042 D		N37	E38	4484	17 D	1	3			5.00			G-SWF
UCCLE	01	1019	1028	1022	S13	W52	4476	9	1	5	1022	2.20	4.40			
UCCLE	01	1051	1150 D	1056	S14	W44	4476	59 D	2	3	1056	4.50	7.00			
UCCLE	01			1102	S16	W42	4476	59 D	2&	3	1102	9.50	14.00			
CAPRI G	01	1052 E	1112 D		S20	W30	4478	20 D	1	3			5.00			
CAPRI G	01	1052 E	1130	1055	S12	W44	4476	38 D	2	3	1055		1.10			
AROSA	01	1052 E	1130 D		S14	W40	4476	38 D	2							G-SWF
CAPRI S	01	1053 E	1131		S14	W40	4476	38 D	1&	3	1100	3.00	4.20			
UCCLE	01	1100	1110	1103	S22	W34	4478	10	1	4	1103	2.00	2.40			
R O EDIN	01	1107 E	1131		S13	W41	4476	24 D	1&	1		3.00	3.90			
MCMATH	01	1131 E	1250		S15	W45	4476	79 D	1&	2	1210	2.89	4.08		81	
CAPRI G	01	1205	1231 D		S10	W45	4476	26 D	1	3			4.00			
AROSA	01	1220 E	1230		S09	W47	4476	10 D	1							
AROSA	01	1220 E	1230		N19	W54	4475	10 D	1							
CAPRI G	01	1323 E	1329		S18	E49	4483	6 D	1	3			3.00			
CAPRI G	01	1323 E	1340		N14	E82	4493	17 D	1	3			3.00			
MCMATH	01	1412	1500	1418	N34	E35	4484	48	1	2	1420	2.57	4.48		67	
MCMATH	01	1535	1625	1544	N34	E38	4484	50	1	3	1544	1.61	2.77		73	
MCMATH	01	1537	1558	1544	N20	E40	4484	21								Slow S-SWF
OTTAWA	01	1538	1555	1540	N21	E39	4484	17	1	2	1540	1.68	2.49			
CAPRI G	01	1540 E	1547 D		N39	E43	4484	7 D	1	2			2.00			
MCMATH	01	1600	1640	1614	S06	W45	4476	40	1	2	1614	1.93	2.74			
R O EDIN	01	1612 E	1627		S06	W43	4476	15 D	1	1	1620	2.00	2.70	1.56		
SAC PEAK	01	1630	1655	1635	S11	W56	4476	25	1&	2		4.80			22	
CLIMAX	01	1631	1657	1635	S08	W56	4476	26	1		1635	4.60				
MCMATH	01	1631	1705	1635	S10	W53	4476	34	1&	2	1635	1.93	3.32		116	S-SWF
OTTAWA	01	1632			S10	W53	4476		1&	2	1634	2.96	4.97			
USNRL	01	1632	1708	1634	S11	W55	4476	36	1&	3	1634	1.93	3.28	2.00	172	
HUANCAYO	01	1633 E	1658	1635	S10	W52	4476	25 D	1	2						
USNRL	01	1636	1703	1644	S15	W15	4478	27	1	3	1644	1.13	1.87	1.00	132	
CLIMAX	01	1642	1655	1648	S12	W56	4476	13	1		1648	3.10				
USNRL	01	1648	1718	1653	S24	W38	4478	30	1	2	1653	1.13	1.52		128	
USNRL	01	1800	1845	1809	S25	W38	4476	45	1	2	1809	.79	1.05		158	
MCMATH	01	1846	1915	1855	N24	E44	4484	29	1	1	1855	1.45	2.49			

COMMERCE — STANDARDS — BOULDER

SOLAR FLARES

APRIL 1958

OBSERVATORY	DATE Apr. 1958	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
CLIMAX	01	1959	2010	2006	S12	W56	4476	11	1		2006	2.60				
MCMATH	01	2000	2014	2005	S14	W55	4476	14	1	2	2005	1.60	2.81		108	
USNRL	01	2002	2039	2004	S15	W56	4476	37	1	2	2004	1.02	1.77	1.50	153	
NIZAMIAH	02	0427	0441	0433	S15	W58	4476	14	1	3	0433	1.22	2.23	2.00		Slow S-SWF
KODAIKANAL	02	0502 E	0507 D		S26	W34	4478	5 D	2	2	0505			4.80		
NIZAMIAH	02	0505 E	0515		S23	W34	4478	10 D	1&	3	0505	3.65	4.52	2.30		S-SWF
ZURICH	02	0905	0915		S23	W45	4478	10	1	2	0905		2.00			
ZURICH	02	0905	0920 D		N18	E39	4485	15 D	1&	2	0905		2.00			
UCCLE	02	0916 E	0930 D	0918	N20	E38	4485	14 D	1	4	0918	2.20				
ZURICH	02	0910	0918		S14	W62	4476	8	1	2	0910		5.00			
ZURICH	02	0910 E	0940		S27	E76	4494	30 D	1	2	0910		3.00			
ZURICH	02	1020	1046		S16	E30	4483	26	1	2	1028		3.00			
R O EDIN	02	1054	1108	1056	N22	E32	4485	14	1	2	1056	3.00	4.00	2.79		
DUNSINK	02	1055 E	1115		N23	E27	4485	20	2	3	1055	7.50		3.00		
UCCLE	02	1123	1155	1126	S17	E29	4483	32	1&	4	1126	4.00	4.30			
CAPRI G	02	1125 E	1230 D		S15	E27	4483	65 D	1	3			3.00			
AROSA	02	1145 E	1150		S09	W61	4476	5 D	1							
AROSA	02	1145 E	1205 D		S16	E27	4483	20 D	1							
USNRL	02	1248	1332	1252	S25	W40	4478	44	1&	2	1252	2.03	2.82		114	
AROSA	02	1326	1356		S19	E26	4483	30	1							
USNRL	02	1326	1416	1330	S17	E25	4483	50	1	2	1330	1.47	1.67	1.00	131	
R O EDIN	02	1327	1336	1329	S17	E29	4483	9	1	3	1329	4.00	4.60	1.66		
OTTAWA	02	1327	1402		S16	E26	4483	35	1	2	1331	2.44	2.75			
MCMATH	02	1332 E			S17	E35	4483		1	1	1334	2.25	2.66			
CAPRI G	02	1342 E	1357 D		S17	E28	4483	15 D	1	3			3.00			
CAPRI G	02	1355 E	1401 D		N20	E35	4485	6 D	1	3			3.00			
USNRL	02	1355	1410	1356	N22	E37	4485	15	1	2	1356	.90	1.30		123	
AROSA	02	1356	1400 D		N20	E35	4485	4 D	1							
R O EDIN	02	1356	1406	1357	N21	E38	4485	10	1	3	1357	4.00	5.90	2.26		
OTTAWA	02	1356	1408	1358	N22	E35	4485	12	1&	2	1358	2.15	3.05			
CAPRI G	02	1420 E	1425 D		S23	W41	4478	5 D	1	3			3.00			
MCMATH	02	1516 E	1545 D		N34	E25	4484	29 D	1	1	1517	2.57	3.65			G-SWF
ZURICH	02	1520 E	1544		N34	E30	4484	24 D	1	2	1528		3.00			
CAPRI G	02	1533 E	1542 D		S15	E25	4483	9 D	1	2			4.00			
ZURICH	02	1536	1601		S17	E26	4483	25	1	2	1536		3.00			
USNRL	02	1539	1735		S15	E24	4483	116	1	1	1554	1.02	1.11	2.00	158	
MCMATH	02	1540 E	1600 D		S16	E24	4483	20 D	1	1	1545	1.60	1.80		86	S-SWF
R O HERST	02	1541 E	1610	1545	S18	E26	4483	29 D	1	1	1548	.70	.90	4.60	79	
OTTAWA	02	1542	1615		S15	E25	4483	33	1	3	1546	2.03	2.27			
R O EDIN	02	1545 E	1609 D		S15	E27	4483	24 D	1	3	1547	3.50	4.00	2.70		
CAPRI G	02	1533 E	1557 D		N34	E30	4484	24 D	1	2			4.00			
CAPRI G	02	1605 E	1617 D		N31	E19	4484	12 D	1	2			5.00			
OTTAWA	02	1609	1622	1612	N30	E17	4484	13	1&	4	1612	3.94	5.16			S-SWF
R O EDIN	02	1610	1620 D	1612	N32	E21	4484	10 D	2	3	1612	4.00	5.40	4.36		
OTTAWA	02	1641	1729	1651	N19	E29	4485	48	1&	3	1651	3.13	4.01			
USNRL	02	1642	1738	1646	N20	E31	4485	56	1	2	1646	1.13	1.44	2.00	102	S-SWF
R O EDIN	02	1643	1719	1653	N21	E35	4485	36	2	3	1653	4.00	5.80	2.50		
USNRL	02	1726	1738	1727	S15	W68	4476	12	1	2	1727	.45	1.15		116	Slow S-SWF
MCMATH	02	1807	1850	1820	S26	E72	4494	43	1&	2	1820	2.25	8.92		57	S-SWF
USNRL	02	1809	1847	1811	S24	E76	4494	38	1	2	1811	.79	2.84	2.00	80	
HAWAII	02	1918 E	1928	1920	S16	E21	4483	10 D	1	1	1918	1.90	2.00			
MCMATH	02	1951	2020	1954	S16	E23	4483	29	1&	1	1954	2.42	2.61		93	
USNRL	02	1953	2025	1955	S15	E23	4483	32	1&	2	1955	2.26	2.47	2.00	168	S-SWF

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HAWAII	02	1958 E	2030 D		S14	E22	4483	32 D	2	1	1958	6.60	7.20			
KODAIKANAL	03	0412 E	0428 D	0420	S15	E19	4483	16 D	1	2	0415	2.50	2.90	2.20	135	S-SWF
WENDEL	03	0731	0828 D		S16	E17	4483	57 D	1&				6.00			
CAPRI G	03	0737	0753		S16	E14	4483	16	1	2			4.00			
CAPRI G	03	0741	0757 D		N32	E14	4484	16 D	1	2			2.00			
WENDEL	03	0801	0822		S27	E68	4494	21	1				3.00			
UCCLE	03	0812 E	0825		S25	E72	4494	13 D		3						
UCCLE	03	0812 E	0834		S16	E18	4483	22 D		3						
UCCLE	03	0817	0845	0825	N36	E19	4484	28	2	4	0825	6.00	8.00			S-SWF
WENDEL	03	0822	0915		N33	E21	4484	53	1&				7.00			
CAPRI G	03	0925 E	0930 D		N31	E10	4484	5 D	1	2			2.00			
CAPRI G	03	1019	1032 D		S14	E16	4483	13 D	1	2			5.00			
WENDEL	03	1020 E	1030		S15	E21	4483	10 D	1				3.00			
UCCLE	03	1021	1025	1022	S16	E20	4483	4	1	2	1022	3.50	3.50			
AROSA	03	1021	1027		S19	E19	4483	6	1							
UCCLE	03	1038	1040		S15	E15	4483	2	1	1		2.20				
MCMATH	03	1132 E	1200 D		S16	E16	4483	28 D	1	1	1149	3.22	3.41			
CAPRI G	03	1311 E	1320 D		S15	E16	4483	9 D	1	1			5.00			
CAPRI G	03	1311 E	1320 D		N35	E17	4484	9 D	1	1			3.00			
CAPRI G	03	1320 E	1357 D		S21	E65	4494	37 D	1	1			3.00			
AROSA	03	1325 E	1346		S28	E70	4494	21 D	1							
ZURICH	03	1326	1355		S25	E59	4494	29	1	2	1326		3.00			
WENDEL	03	1358 E	1434		S17	E12	4483	36 D	1				3.00			
SAC PEAK	03	1402	1430	1410	S16	E13	4483	28	1	3		2.50			20	
MCMATH	03	1403	1425 D	1409	S16	E14	4483	22 D	1	1	1409	2.57	2.70		61	
AROSA	03	1403	1427		S13	E12	4483	24	1&							
ZURICH	03	1404	1420 D		S15	E13	4483	16 D	1	2	1404		3.00			
CLIMAX	03	1404	1432	1415	S16	E13	4483	28	1		1415	3.70				
OTTAWA	03	1405		1408	S16	E13	4483		1&	3	1408	3.60	3.76			
SAC PEAK	03	1435	1515	1442	N33	E14	4484	40	1	3		2.60			17	
CLIMAX	03	1437	1500	1446	N35	E13	4484	23	1		1446	2.70				
AROSA	03	1437	1515 D		N36	E15	4484	38 D	1&							
MCMATH	03	1437	1520	1442	N35	E15	4484	43	1	1	1442	2.89	4.05		61	Slow S-SWF
OTTAWA	03	1438	1515	1444	N33	E13	4484	37	1	3	1444	3.42	4.61			
USNRL	03	1439	1526	1448	N35	E15	4484	47	1	2	1448	1.58	2.16	1.00	93	
WENDEL	03	1440 E	1522		N33	E16	4484	42 D	2				8.00			
ZURICH	03	1445 E	1505		N33	E14	4484	20 D	1	2	1445		5.00			
WENDEL	03	1539	1622		S12	E14	4483	43	1				3.00			
CLIMAX	03	1721	1801	1742	S13	E10	4483	40	1		1742	3.70				G-SWF
CLIMAX	03	1814	1839	1822	S26	E68	4494	25	1		1822	4.70				
MCMATH	03	1815	1830 D		S26	E65	4494	15 D	1&	1	1820	2.57	5.61		53	
SAC PEAK	03	1815	1835	1822	S26	E67	4494	20	1	3		2.40			17	
CLIMAX	03	1828	1906	1840	S13	E09	4483	38	2		1840	7.40				
HAWAII	03	1830	1848 D	1840	S13	E11	4483	18 D	1	1	1840	2.90	2.90			
SAC PEAK	03	1832	1855	1840	S16	E08	4483	23	1&	3		4.90			22	Slow S-SWF
USNRL	03	1832	2014	1837	S15	E09	4483	42	1&	3	1837	2.60	2.68	1.00	117	
MCMATH	03	1840 E	1855		S15	E09	4483	15 D	1&	1	1845	5.79	5.91		69	
CLIMAX	03	1909	1951	1925	S14	E09	4483	42	1		1925	2.10				
SAC PEAK	03	2005	2035	2012	S25	E65	4494	30	1	3		2.70			19	
USNRL	03	2005	2050	2010	S24	E65	4494	45	1	3	2010	.90	2.08		79	G-SWF
MCMATH	03	2010 E	2025 D		S25	E63	4494	15 D	1	1	2012	1.93	4.21		51	
MITAKA	04	0133 E	0139		N38	E06	4484	6 D	1	1	0133	.41	.56	1.81	91	

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KODAIKANAL	04	0305 E	0338 D	0318	S17	W47	4480	33 D	1	1	0309	3.90	5.40	2.80	135	
MITAKA	04	0401 E	0411 D		N30	E04	4484	10 D	1	1	0404	3.71	4.52	1.70	96	
MITAKA	04	0545	0602		N10	W33	4487	17	1	1	0549	2.78	3.28	1.89	115	
ATHENS	04	0755 E	0808 D		N18	E71	4493	13 D	1	3		.70	2.40			
WENDEL	04	0906	0925 D		N23	E09	4484	19 D	1				3.00			
MCMATH	04	1133 E	1152		N07	W33	4487	19 D		1	1134	2.25	2.79		81	
WENDEL	04	1157 E	1202 D		N08	W34	4487	5 D	1				3.00			
MCMATH	04	1321	1337 D		N20	E07	4485	16 D	1	1	1336	1.93	2.16		60	
MCMATH	04	1921	1930	1922	S16	E02	4483	9	1	1	1922	1.77	1.79		89	Slow S-SWF
USNRL	04	1921	1933	1921	S17	E02	4483	12	1	2	1921	1.35	1.38	2.00	125	
MCMATH	04	1933	2005	1940	S15	W05	4483	32	1	1	1940	2.57	2.60		68	
MITAKA	04	2340 E	2359		S15	W07	4483	19 D	1	1	2350	4.70	4.80	1.45	120	
MITAKA	05	0014 E	0021	0014	N13	E49	4493	7 D	1	1	0015	1.84	2.93	3.87	149	
MITAKA	05	0018 E	0045	0019	N15	E25	4490	27 D	1	1	0019	3.71	4.50	3.14	149	
MITAKA	05	0112 E	0119		N31	W08	4484	7 D	1	1	0114	1.84	2.32	1.95	105	
MITAKA	05	0123	0132	0130	S13	W32	4480	9	1&	1	0124	4.70	5.55	1.57	131	
MITAKA	05	0259 E	0305 D	0259	S14	W04	4483	6 D	1&	1	0259	3.80	3.84	2.62	162	
MITAKA	05	0447 E	0454	0447	N19	E39	4493	7 D	1&	1	0447	3.80	5.16	1.36	134	
AROSA	05	0710	0727		N28	W08	4484	17	1							
ATHENS	05	0712	0741		N30	W08	4484	29	1	3		1.70	2.10			
AROSA	05	0724	0729		N20	W02	4485	5	1							
WENDEL	05	0745 E	0754		N22	W03	4485	9 D	1				3.00			
AROSA	05	0727	0803		S19	W08	4483	36	1&							
WENDEL	05	0745 E	0805 D		S18	W09	4483	20 D	1&				8.00			
WENDEL	05	0752	0849	0809	N30	W08	4484	57	2&				13.00			
AROSA	05	0803	0846		N28	W09	4484	43	2							
ATHENS	05	0805	0845		N31	W08	4484	40	1	3		3.70	4.60			
OTTAWA	05	1352	1450	1357	S14	W13	4483	58	1&	3	1357	2.90	3.02			Slow S-SWF
OTTAWA	05	1448	1500	1450	N16	E55	4493	12	1	2	1450	1.45	2.90			
SAC PEAK	05	1835	1930	1845	S25	E36	4494	55	1	2		3.80			18	G-SWF
SAC PEAK	05	1925	1950	1935	N43	E80	4495	25	2	2		7.30			20	Slow S-SWF
HAWAII	05	1930	1948	1934	N45	E85	4495	18	2	2	1934	3.30	7.70			
SAC PEAK	05	2020	2115	2030	N16	E53	4493	55	1	2		4.60			16	G-SWF
CAPRI G	06	1335 E	1353		N13	E36	4493	18 D	1	2			2.00			
CAPRI G	06	1550 E	1557 D		N18	E43	4493	7 D	1	3			2.00			
CLIMAX	06	1651	1804	1721	N31	W49	4484	73	1		1721	2.10				
CLIMAX	06	1929	2010	1940	S14	W28	4483	41	1		1940	2.60				
SAC PEAK	06	1930	2025	1940	S17	W27	4483	55	1	2		2.30			17	
HAWAII	06	2210	2228	2214	N11	E36	4493	18	1	1	2214	1.60	2.20			
NEDERHORST	07	1016 E	1100 D		N13	E30	4493	44 D	3							
CAPRI S	07	1021 E	1029 D		N12	E35	4493	8 D	1&	2	1024	4.00	4.80			S-SWF
NIZAMIAH	07	1025 E	1033 D		N15	E32	4493	8 D	2	2	1025	7.29	8.62	2.60		
SAC PEAK	07	1625	1750 U	1637	N46	E70	4495	85 D	1	2		2.40			15	
MCMATH	07	1629	1745		N45	E60	4495	76	1	1						
MCMATH	07	2024	2045	2034	N15	E02	4490	21	1	2	2034	3.21	3.44		67	
MCMATH	07	2048	2115	2057	N15	E06	4490	27	1	2	2057	3.54	3.75		74	
SAC PEAK	07	2210	2240 U	2212	N11	W04	4490	30 D	1	2		3.40			15	
HAWAII	07	2336	0040	2346	N08	E19	4493	64	1&	2	2346	3.10	3.40			
HAWAII	08	0038	0052	0038	N12	W20	4490	14	1	2	0038	3.50	3.90			
NIZAMIAH	08	0301	0329	0309	S17	W44	4483	28	1	2	0309	3.04	4.28	1.90		Slow S-SWF

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CAPRI G	08	0850 E	0905 D		N34	W47	4484	15 D	1	2			3.00			
ARCETRI	08	0854			N33	W46	4484		1	3	0854	1.70	3.20			
CAPRI G	08	0912 E	0920 D		N12	E65	4498	8 D	1	3			2.00			
UCCLE	08	0917 E	1035 D	0918	N15	E45	4498	78	1&	2	0918	3.40				
CAPRI G	08	1418 E	1425 D		N16	E19	4493	7 D	1	3			3.00			
HAWAII	08	2328	0020	2350	N14	E70	4498	52	1	2	2350	2.90	6.70			
MT WILSON	08	2350 E			N12	E68	4498		1							
UCCLE	09	0852 E	0856		N12	W39	4490	4	1	3		2.00	2.60			
CAPRI G	09	1158 E	1202 D		S25	W90	4483	4 D	1	2			3.00			
CAPRI G	09	1220 E	1302 D		S12	E42	4497	42 D	1	2			2.00			
MCMATH	09	1222	1310	1232	S10	E44	4497	48	1	2	1232	2.25	3.08			
USNRL	09	1225	1320	1230	S12	E44	4497	55	1	1	1230	1.69	2.36		71	
MCMATH	09	1346	1410	1347	N13	E02	4493	24	1&	1	1347	5.14	5.40			
OTTAWA	09	1435	1456	1437	N10	W40	4490	21	1	2	1437	2.09	2.89			
MCMATH	09	1435	1510	1442	N12	W41	4490	35	1	2	1442	2.57	3.55		80	G-SWF
USNRL	09	1435	1534		N11	W42	4490	59	1&	1	1437	2.03	2.82	1.00	110	
MCMATH	09	1442	1515	1450	N26	W56	4484	33	1	1	1450	1.61	3.78		68	
MCMATH	09	1840	2020	1900	N24	W60	4485	100	1&	1	1900	3.86	9.26			
MCMATH	09	2140	2200 D	2149	N07	E00	4493	20 D	1	2	2149	2.09	2.13		87	
HAWAII	10	0052 E	0132 D		N25	W63	4485	40 D	1	1	0052	1.50	3.60			Slow S-SWF
UCCLE	10	0858	0952	0912	S13	E35	4497	54	1&	4	0912	3.40	3.60			
UCCLE	10	0900	1007	0914	N15	W85	4485	67	1&	4	0914	2.20	4.40			
CAPRI G	10	1010 E	1150 D		N18	W78	4485	100 D	1	3			4.00			
R O EDIN	10	1013 E	1046 D		N20	W74	4485	33 D	1&	1	1021	4.00		1.93		
UCCLE	10	1037	1042	1038	N15	W85	4485	5	2	2	1038	3.40	6.80			
CAPRI G	10	1215 E	1220 D		N09	W53	4490	5 D	1	3			3.00			
CAPRI S	10	1548 E	1650 D		N07	W06	4493	62 D	1	2	1618	3.00	3.00			
CAPRI G	10	1550 E	1635 D	1625	N09	W10	4493	45 D	1	3	1625		6.00			
HUANCAYO	10	1615	1646	1619	N05	W10	4493	31	2	2						S-SWF
SAC PEAK	10	1615	1650 U	1622	N08	W14	4493	35 D	2	2		6.20			20	
R O EDIN	10	1625 E	1644		N08	W10	4493	19 D	2	1	1632	8.00	8.30	1.57		
OTTAWA	10	1631 E	1659		N07	W12	4493	28 D	1&	1	1634	3.71	3.92			
HUANCAYO	10	2015	2040	2034	N25	W79	4485	25	1	2						G-SWF
MT WILSON	10	2103	2120		N05	W13	4493	17	1&							
SAC PEAK	10	2217	2245	2222	N17	W90	4485	28	1&	2		2.50			30	S-SWF
MT WILSON	11	0000	0013		N15	W80	4490	13	1							
UCCLE	11	1118 E			N30	W58	4484			2						
UCCLE	11	1118 E			N12	W72	4490		1&	2		1.70	4.50			
R O EDIN	11	1122 E	1130		N11	W69	4490	8 D	1	1	1124	2.00	3.80	1.58		
MT WILSON	11	1950	1956		N08	W25	4493	6	1							
HUANCAYO	11	1950 E	2005	1950	N05	W15	4493	15 D	1	2						
WENDEL	12	1140 E	1203 D		N12	W85	4490	23 D	1				3.00			
UCCLE	12	1150	1204	1157	N10	W88	4490	14	1&	4	1157	2.20	4.40			
MCMATH	12	1700	1720	1705	N12	W17		20	1	1	1705	2.41	2.65			
MT WILSON	13	2112	2119		N15	W55	4493	7	1							
CAPRI G	14	1245 E	1250 D		N25	W52	4493	5 D	1	2			3.00			
R O EDIN	14	1311 E	1331 D	1312	N25	W58	4493	20 D	1	2	1312	1.50	2.00	1.96		
MCMATH	14	1526	1600	1535	N20	W60	4493	34	1	3	1535	1.45	3.42		66	
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MCMATH	14	1645	1740	1709	N12	W08	4498	55	1	3	1709	2.58	2.73		70	
MCMATH	14	1651	1720	1703	N26	W60	4493	29	1	3	1703	2.09	4.93		61	
USNRL	14	1818	1823 D	1820	N17	W63	4493	5 D	1	2	1820	.79	2.16		89	
MCMATH	14	2040	2205 D	2105	N13	W10	4498	85 D	2	3	2105	6.43	6.88		87	
USNRL	14	2043	2146	2051	N13	W08	4498	63	1	2	2051	1.69	1.81	1.00	114	
SAC PEAK	14	2045	2155 U	2057	N13	W10	4498	70 D	2	2		5.90			15	
CLIMAX	14	2046	2150		N13	W09	4498	64	2		2104	10.60				
CAPRI S	15	0709 E	0714 D		S21	E75	4508	5 D	1	2	0713	.70	2.50			
WENDEL	15	0710 E	0745 D		S18	E74	4508	35 D	1&				6.00			S-SWF
CAPRI G	15	0925 E	0932 D		S21	E73	4508	7 D	1	2			3.00			S-SWF
R O HERST	15	1026 E			S21	E75	4508		1	1	1026	1.00	2.50			
UCCLE	15	1044 E			S20	E78	4508			1						
MCMATH	15	1151	1215	1157	N13	W15	4498	24	1	3	1157	2.89	3.18		75	
UCCLE	15	1154 E	1158		N11	W16	4498	4 D	1	4						
UCCLE	15	1154 E	1200 D		N13	W12	4498	6 D	1	4						
USNRL	15	1217	1240	1228	S21	E76	4508	23	1&	3	1228	.56	2.38		103	
MCMATH	15	1327	1345	1331	S10	E35	4505	18	1	2	1331	2.09	2.55			
MCMATH	15	1422	1442	1430	N16	E46	4506	20	1	2	1430	1.28	2.12			
MCMATH	15	1510	1530	1515	N18	E46	4506	20	1	2		2.25	3.72			
MCMATH	15	1535	1550	1538	N16	E46	4506	15	1	2	1538	1.28	2.12			
MCMATH	15	1735	1805	1739	S20	E70	4508	30	1	2	1739	1.29	3.73		72	
MCMATH	15	1735	1830	1744	N16	E44	4506	55	1	2	1744	1.13	1.86		87	
MCMATH	15	1810	1835	1820	S20	E70	4508	25	1	2	1820	1.12	3.26			
MCMATH	15	2027	2055	2032	S10	W40	4497	28	1	2	2032	2.25	2.93		65	
CAPRI G	16	0855 E	0907 D		S18	E61	4508	12 D	1	2			3.00			
CAPRI G	16	0952 E	0957 D		N18	E37	4506	5 D	1	2			3.00			
CAPRI G	16	1005 E	1022 D		S09	W44	4497	17 D	1	1			2.00			
UCCLE	16	1016	1030	1019	S20	E65	4508	14	2	4	1019	3.00	6.00			S-SWF
CAPRI G	16	1018 E	1022 D		S18	E61	4508	4 D	1&	1			4.00			
MCMATH	16	1148	1300 D		S20	E60	4508	72 D	1	1	1152	1.45	2.89		62	
MCMATH	16	1213	1240	1225	N16	E34	4506	27	1	1	1225	3.54	4.95			
MCMATH	16	1300	1330	1303	S10	W50	4497	30	1	2	1303	2.25	3.49			
OTTAWA	16	1323 E	1330		S20	E58	4508	7 D	1	1	1325	1.22	2.37			
MCMATH	16	1405	1445	1419	S20	E60	4508	40	1	2	1419	2.74	5.47			
MCMATH	16	1405	1520		N15	E34	4506	75	1	2	1425	4.50	5.85			
MCMATH	16	1513	1540	1517	N13	W34	4498	27	1	2	1517	2.09	2.72			
MCMATH	16	1530	1550	1535	S20	E58	4508	20	1	2	1535	1.28	2.50			
MCMATH	16	1648	1700	1652	S20	E57	4508	12	1	2	1652	1.61	3.14		75	
OTTAWA	16	1649			S19	E56	4508		1	3	1652	1.22	2.23			
MT WILSON	16	1650	1656		S21	E58	4508	6	1							
MCMATH	16	1800	1820	1810	N17	E30	4506	20	1	2	1810	2.73	3.55			
MCMATH	16	1836	1900	1842	N17	E30	4506	24	2	2	1842	4.82	6.27		76	
MT WILSON	16	2117			N16	E28	4506		1							
MT WILSON	16	2238	2306		N20	W18	4498	28	1							
CAPRI G	17	1012 E	1025		N16	W49	4498	13 D	1	3			3.00			
CAPRI G	17	1130 E	1222		S17	W42	4497	52 D	1	3			4.00			
CAPRI G	17	1233 E	1245 D		S17	W46	4497	12 D	1	3			5.00			
MCMATH	17	1235	1325	1250	S18	E44	4508	50	1	2	1250	1.61	2.25			
USNRL	17	1521	1624	1529	S19	E45	4508	63	1	2	1529	1.58	2.35	1.00	77	
MCMATH	17	1615	1632	1624	S20	E40	4508	17	2	2	1624	4.18	5.44		102	
USNRL	17	1616	1646	1620	S20	E38	4508	30	1	2	1620	1.81	2.37		98	Slow S-SWF

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OBSERVATORY	DATE Apr. 1958	OBSERVED UNIVERSAL TIME START	END	MAX. PHASE	LOCATION APPROX. LAT.	MER. DIST.	McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
OTTAWA	17	1619 E	1635	1621	S20	E37	4508	16 D	1&	3	1621	2.67	3.44			
HUANCAYO	17	1623 E	1630	1623	S22	E39	4508	7 D	1	2						
MCMATH	17	1626	1635	1629	S10	E62	4512	9	1	2	1629	1.61	3.80		87	
OTTAWA	17	1626	1652	1628	S09	E66	4512	26	1	3	1628	1.68	4.28			
MT WILSON	17	1634 E			N11	E65	4513		1							
MCMATH	17	2142	2202 D	2150	N14	E50	4507	20 D	1	2	2150	1.29	2.24		84	
MT WILSON	17	2425	2446		N38	E50	4510	21	1							
MT WILSON	17	2427	2447		N16	E30	4506	20	1							
MCMATH	18	1210	1230	1220	S21	E34	4508	20	1	1	1220	2.25	2.84			
MCMATH	18	1443	1530	1448	N23	E36	4508	47	1	2	1448	1.77	2.50			
MCMATH	18			1504						2	1504	1.61	2.27			
MT WILSON	18	1500 E			N22	E33	4507		1							
MT WILSON	18	2031	2046		S05	E50	4512	15	1							
MCMATH	18	2112	2132	2116	N25	E33	4507	20	1	1	2116	1.93	2.62			
MT WILSON	18	2113	2133		N20	E08	4506	20	1							
MT WILSON	18	2200	2210		S05	E50	4512	10	1							
MT WILSON	18	2332	2336		S05	E50	4512	4	1							
ZURICH	19	0920	0933		N23	E25	4507	13	1	3	0920		3.00			
CAPRI G	19	1018	1035		N23	E21	4507	17	1	3			3.00			
MCMATH	19	1250	1320	1256	N17	W05	4506	30	1	2	1256	3.21	3.47		72	
CAPRI G	19	1300 E	1313		N18	W03	4506	13 D	1	3			5.00			
CAPRI G	19	1334 E	1340 D		S20	E25	4508	6 D	1	1			3.00			
MCMATH	19	1718	1745 D	1727	N18	W07	4506	27 D	2	1	1727	5.15	5.61		67	
UCCLE	19	1724	1735	1025	N25	E19	4507	11	1&	3	1025	4.00				
MT WILSON	19	1724	1742		N23	E19	4507	18	1							
MCMATH	19	1821	1835 D	1824	S20	W20	4516	14 D	1	1	1824	3.05	3.36			
MT WILSON	19	2107	2117		N23	E18	4507	10	1							
MT WILSON	19	2215	2225		S30	E19	4508	10	1							
SAC PEAK	19	2305	2330	2312	S22	E90	4520	25	1	2		4.60			24	
MITAKA	20	0114	0123		N25	E17	4507	9	1	1	0115	1.84	2.23	1.87	107	
UCCLE	20	0704	0711	0707	S20	E10	4508	7	1	3	0707	2.20				
UCCLE	20	0725	0740	0727	N25	E15	4507	15	1	3	0727	2.00				
WENDEL	20	0956 E	1011 D		S22	E90	4520	15 D	1&							
CAPRI G	20	1000	1008		S14	E75	4517	8	1	3			4.00			
UCCLE	20	1035	1320	1100	N18	W75	4498	165	1&	4	1100	3.40	5.10			
UCCLE	20	1215	1250	1236	N15	E42	4514	35	1	4	1236	2.20				
UCCLE	20	1347	1406	1354	S25	E03	4508	19	1&	4	1354	3.40				
ZURICH	20	1352	1411		S25	E04	4508	19	1	3	1352		4.00			
CAPRI G	20	1353	1406		S21	E09	4508	13	1	3			4.00			
WENDEL	20	1507	1530		S26	W02	4508	23	1				3.00			
UCCLE	20	1518	1542	1529	S21	E85	4520	24	1&	3	1529	3.30	6.60			
MT WILSON	20	2257	2300		N21	E02	4507	3	1							
CAPRI G	21	0630 E	0640		N18	W25	4506	10 D	1	3			3.00			
CAPRI G	21	0717 E	0742		S20	W03	4508	25 D	1	3			4.00			
CAPRI G	21	0736 E	0743		N18	W31	4506	7 D	1	3			2.00			
MCMATH	21	1300	1330	1310	S13	E56	4517	30	1	1	1310	1.73	3.20			
MT WILSON	21	1755	1801		N16	W35	4506	6	1							
MT WILSON	21	2051	2058		N16	W36	4506	7	1							
MITAKA	22	0220 E	0230		N25	W08	4507	10 D	1	1	0222	.89	1.06	1.63	96	

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CAPRI G	22	0827 E	0905		S20	W13	4508	38 D	1	1			4.00			
ZURICH	22	0834	0858		S22	W14	4508	24	2	3	0834		6.00			S-SWF
ZURICH	22	1228 E	1238		N11	W25	4511	10 D	1	3	1228		1.00			
CAPRI G	22	1317 E	1340		N12	W18	4511	23 D	1	2			2.00			
MCMATH	22	1527	1550	1533	N15	E10	4514	23	1	1	1533	2.73	2.95			
MT WILSON	22	1530	1552		N12	E07	4514	22	1							
CAPRI G	22	1536	1553		N14	E16	4514	17	1	3			5.00			
MT WILSON	22	1633	1639		N07	E41	4519	6	1							
MT WILSON	22	1903 E			S22	W20	4508		1							
MT WILSON	22	1904	1959		N12	E09	4514	55	1							
MT WILSON	22	1916	1921		N08	E42	4519	5	1							
MT WILSON	22	2249	2254		N23	W30	4507	5	1							
MCMATH	23	1455	1525	1458	N15	W05	4514	30	1	1	1458	3.54	3.75		62	
SAC PEAK	23	1455	1530	1505	N15	W03	4514	35	1	2		3.00			17	
USNRL	23	1851	1935	1857	N16	W08	4514	44	1	3	1857	1.13	1.22	1.00	126	
USNRL	23	2040	2056	2040	N15	W08	4514	16	1	3	2040	1.02	1.09	1.00	109	
UCCLE	24	0815	0829	0817	S20	W43	4508	14	1	3		2.20	2.40			
UCCLE	24	1142	1204 D	1152	S17	W88	4516	22 D	1&	4		2.80	5.60			
MCMATH	24	1255	1350 D	1317	N12	E23	4519	55 D	1	1	1317	3.21	3.60			
USNRL	24	1827 E	1948 D	1837	N12	E21	4519	81 D	1	1	1837	1.47	1.65		107	
SAC PEAK	24	1832	1845	1835	N11	E21	4519	13	1	2		2.70			15	
CAPRI G	25	1055 E	1125 D		N14	W32	4514	30 D	1	2			3.00			
MCMATH	25	1415	1445	1423	N10	E25	4522	30	1&	1	1423	6.43	7.20		65	
USNRL	25	1415	1519	1437	N10	E24	4522	64	1	2	1437	1.92	2.20	1.00	79	
WENDEL	25	1614 E	1627 D		N12	E82	4529	13 D	1				3.00			
MCMATH	25	1947	2015	1949	N22	E90	4529	28	1	1	1949					
CAPRI G	26	0630 E	0642 D					12 D	1&	2			6.00			
ZURICH	26	0739 E	0754		S23	W71	4508	15 D	1	2	0739		1.00			
ZURICH	26	0840 E	0851		N18	E74	4529	11 D	1	2	0840		1.00			
WENDEL	26	0917 E	0930 D		N13	W37	4514	13 D	1&				6.00			
ARCETRI	26	0923			N13	W39	4514		1	3	0923	2.50	3.20			
CAPRI G	26	1025 E	1050 D					25 D	1	2						
CAPRI G	26	1047	1107					20	1	2						
ZURICH	26	1049	1114 D		N19	E75	4529	25 D	1&	2	1049		5.00			
WENDEL	26	1049 E	1116 D		N17	E76	4529	27 D	1&				6.00			S-SWF
CAPRI S	26	1052	1105 D		N17	E75	4529	13 D	1	3	1054	.70	2.90			
ONDREJOV	26	1055 E	1107		N16	E71	4529	12 D	2							
CAPRI G	26	1215	1217 D		N20	E90	4529	2 D	1	3						
CAPRI G	26	1223	1236		N18	E78	4529	13	1	3			4.00			
USNRL	26	1226 E	1303		N25	E85	4531	37 D	1	2	1227	.45	3.22		75	
CAPRI G	26	1415	1515		N29	E90	4531	60	1	3			2.00			
CAPRI G	26	1545	1610 D		S11	W09	4520	25 D	1	3			4.00			
CAPRI G	26	1605 E	1610 D		N19	E78	4529	5 D	1	3			2.00			
CAPRI G	26	1618 E	1622 D		S22	E68	4528	4 D	1	1			3.00			
MT WILSON	26	2307	2319		N27	E58	4527	12	1							
CAPRI G	27	0735 E	0749		N10	W03	4522	14 D	1	3			3.00			
CAPRI G	27	0745	0825		N11	W11	4522	40	2	3			7.00			S-SWF
CAPRI G	27	1458	1518		S14	E77	4530	20	1	3			2.00			
MT WILSON	27	2318	2353		N09	W08	4522	35	1							Slow S-SWF

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OBSERVATORY	DATE Apr. 1958	OBSERVED UNIVERSAL TIME START	OBSERVED UNIVERSAL TIME END	OBSERVED UNIVERSAL TIME MAX. PHASE	LOCATION APPROX. LAT.	LOCATION APPROX. MER. DIST.	LOCATION McMATH PLAGE REGION	DURATION — MINUTES	IMPORTANCE	OBS. COND.	MEASUREMENTS TIME — U T	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %	PROVISIONAL IONOSPHERIC EFFECT
MITAKA	28	0002 E	0018		S18	E83	4530	16 D	1	1	0010	1.34	4.61	2.89		Slow S-SWF
MITAKA	28	0220	0240		N17	E53	4529	20 D	1	1	0228	2.78	4.95	1.66	107	
MITAKA	28	0527 E	0543 D		S15	E74	4530	16 D	1	1	0529	2.78	8.06	2.56		S-SWF
CAPRI G	28	1454 E	1506		N20	E42	4529	12 D	1	3			3.00			
SAC PEAK	28	2317	2355 D	2327	S19	E55	4530	38 D	2	2		5.40			18	
CAPRI G	29	0900	0940	0917	N11	W28	4521	40	1&	3	0917		5.00			
UCCLE	29	0913	1002	0934	N08	W30	4521	49	2	4		5.60				
UCCLE	29	1105	1135	1113	S15	E58	4530	30	1	4		2.20	2.40			
CAPRI G	29	1111	1127		S13	E56	4530	16	1	3			3.00			
CAPRI G	29	1108	1116		S10	W52	4517	8	1	3			2.00			
UCCLE	29	1128	1200 D	1155	N30	E50	4531	32 D	2	4		7.90	8.70			
CAPRI G	29	1129	1240 D	1200	N30	E51	4531	11 D	2&	3	1200		10.00			Slow S-SWF
CAPRI S	29	1156 E	1217		N32	E50	4531	21 D	2	3	1210	5.50	10.50			
CAPRI G	29	1220	1230 D		S14	E55	4530	10 D	2-	3			6.00			
CAPRI G	29	1315 E	1325 D		S14	E55	4530	10 D	1	3			4.00			
USNRL	29	1425	1526	1436	N28	E46	4531	61	1&	2	1436	1.24	2.25	1.00	102	
MCMATH	29	1426 E			S16	E47	4530		1	1		2.90	4.49			
CAPRI G	29	1457	1509		N30	E50	4531	12 D	1	3			5.00			
CAPRI G	29	1527	1537		S24	E29	4528	10	1&	3			5.00			
MCMATH	29	1655 E	1700 D		S15	E38	4530	5 D	1	2		1.61	2.09		74	
MCMATH	29	1855 E	1950 D		S16	E45	4530	55 D	2&	2		5.79	8.97		130	
HAWAII	29	1856	1958	1912	S18	E45	4530	62	2	3	1912	6.80	9.70			S-SWF
SAC PEAK	29	1859	1902 D	1902	S12	E46	4530	3 D	1&							
USNRL	29	1909 E	2013	1915	S16	E48	4530	64 D	2&	2	1915	3.51	5.40	2.00	125	
MCMATH	29	2120 E	2135 D		S17	E40	4530	15 D	2	2		5.79	8.11		93	G-SWF
CAPRI G	30	0628	0656	0644	S15	E38	4530	28	1&	3	0644		5.00			
CAPRI G	30	0804	0816		S15	E38	4530	12	1	3			4.00			S-SWF
ZURICH	30	0805	0816		S16	E35	4530	11	1	2	0805		3.00			
UCCLE	30	0834	0852	0838	N20	E18	4528	18	1	4		2.20				
UCCLE	30	0905	0937	0915	S15	E46	4530	32	1	4		2.20				
CAPRI G	30	0908	0920 D		S17	E45	4530	12 D	1	2			5.00			S-SWF
CAPRI S	30	0908	1005		S17	E44	4530	57	1	2	0927	2.00	3.00			
SCHAUINS	30	0936 E	0955		S20	W10	4524	19 D	2							
CAPRI G	30	0937 E	0950 D		S22	W10	4524	13 D	2	2			10.00			
CAPRI S	30	0937 E	1001		S21	W05	4524	24 D	1	2	0937	2.20	2.40			
UCCLE	30	0937	1002	0938	S22	W10	4524	25	2	4		5.80				
ZURICH	30	0947 E	1004		S21	W13	4524	17 D	1	2	0947		3.00			
CAPRI G	30	0940 E	1009		S16	E45	4530	29 D	1&	2			6.00			
ZURICH	30	0947 E	1012 D		S17	E41	4530	25 D	1	2	0947		2.00			
ZURICH	30	0952	1008		S16	E33	4530	16	1	2	0952		2.00			
CAPRI G	30	0952 E	1009		N12	E15	4529	17 D	1	2			4.00			
CAPRI G	30	1014	1035		N20	E17	4529	21	1	2			4.00			
UCCLE	30	1015	1030	1023	N21	E16	4529	15	1	3		2.20				
CAPRI G	30	1134	1140 D		N20	E18	4529	6 D	1	3			3.00			
UCCLE	30	1134	1152	1140	N21	E16	4529	18	1	3		2.20				
CAPRI G	30	1245 E	1248 D		N27	E40	4531	3 D	1	3			3.00			
CAPRI G	30	1248 E	1255 D		S16	E37	4530	7 D	1&	3			5.00			
OTTAWA	30	1248	1257 D		S16	E32	4530	9 D	1	2	1251	1.16	1.40			
OTTAWA	30	1248	1257 D		S16	E34	4530	9 D	1	2	1257	5.22	6.44			
MCMATH	30	1250 E	1305 D		S16	E30	4530	15 D	1&	2		3.54	4.32		82	
MCMATH	30	1430 E			S16	E30	4530		1	2		2.41	2.94			
MCMATH	30	1545	1640	1550	S16	E28	4530	55	1	2	1550	1.93	2.28		99	
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MCMATH	30			1628				55	1	2	1628	2.58	3.04		99	
SAC PEAK	30	1545	1647	1550	S16	E32	4530	62	1	2		2.80			17	S-SWF
WENDEL	30	1546	1609		S18	E31	4530	23	1				3.00			
OTTAWA	30	1546	1645	1627	S15	E31	4530	59	1	2	1627	2.55	3.05			
ZURICH	30	1615 E	1631		S15	E32	4530	16 D	1	2	1615		3.00			
SAC PEAK	30	1650	1715	1657	S16	E30	4530	25	1	2		2.50			17	
MCMATH	30	1653	1713	1658	S16	E26	4530	20	1	2	1658	2.42	2.85		108	S-SWF
OTTAWA	30	1653	1718	1701	S16	E29	4530	25	1	2	1701	3.25	3.82			
MCMATH	30	1729	1738	1733	S15	E28	4530	9	1	2	1733	2.09	2.47			
MCMATH	30	1745	1820		S15	E35	4530	35	1&	2	1810	4.82	6.27			
SAC PEAK	30	1930	2000	1940	S16	E28	4530	30	1&	2		2.80			22	
MCMATH	30	1930	2005	1940	S16	E26	4530		1&	3	1940	3.53	4.10		107	S-SWF
USNRL	30	1930	2008 D	1938	S18	E28	4530	38 D	1&	2	1938	1.92	2.23	2.00	119	
SAC PEAK	30	1932	2015	1942	N10	W50	4519	43	1	2		3.30			18	
MCMATH	30	1933	2015	1940	N10	W48	4519	42	2	3	1940	4.50	7.00		97	
USNRL	30	1935	2008 D	1938	N10	W51	4519	33 D	1&	2	1938	1.58	2.64	2.00	121	
HAWAII	30	1938	1952	1940	S18	E27	4530	14	1	3	1940	2.90	3.10			
MCMATH	30	2128 E	2140		S15	E28	4530	12 D	1	2	2128	2.80	3.33			
MCMATH	30	2153	2210 D	2200	N17	E15	4529	17 D	1	2	2200	2.51	2.65			
MCMATH	30	2205	2210 D		N15	E06	4529	5 D	1	2	2210	2.74	2.90			
SAC PEAK	30	2210	2240	2225	N16	E15	4529	30	1	2		3.40			16	
HAWAII	30	2352 E	0000 D	2354	N12	E06	4529	8 D	1	1	2354	2.10	2.10			
														PAGE	10	

CAPRI S ANACAPRI SWEDISH
KODAIKNL KODAIKANAL
KRASNYA KRASNAYA PAKHRA
R O EDIN ROYAL OBSERVATORY, EDINBURGH
R O HERST GREENWICH ROYAL OBSERVATORY, HERSTMONCEUX
SAC PEAK SACRAMENTO PEAK
SCHAUINS SCHAUINSLAND
USNRL UNITED STATES NAVAL RESEARCH LABORATORY

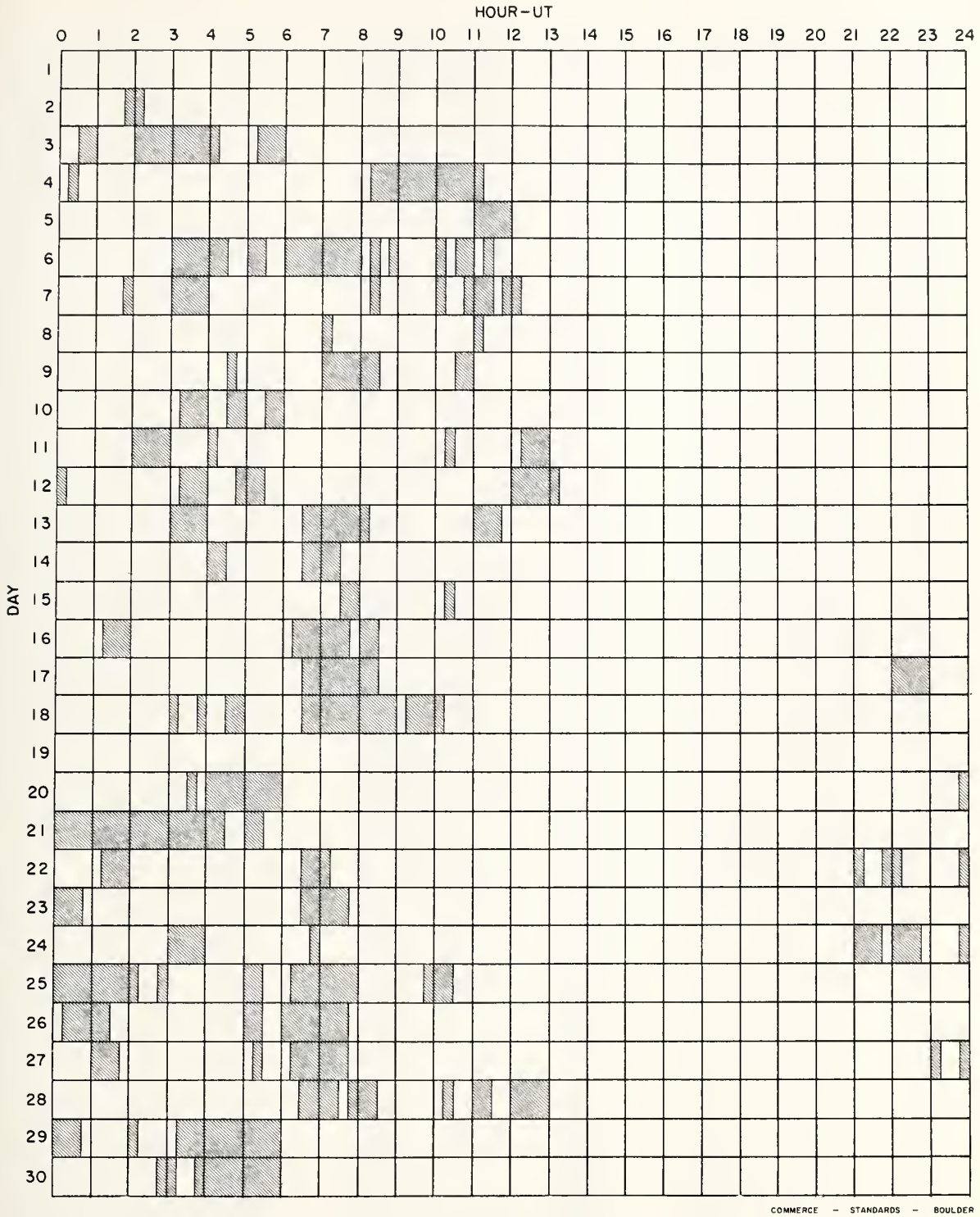
* RATED AS IMPORTANCE 1- BY OTHER OBSERVATORIES

SAC PEAK: ALL VALUES IN MAX. INT. COLUMN ARE ARBITRARY UNITS (0-40), NOT PERCENT OF CONTINUOUS SPECTRUM.

E - LESS THAN
D - GREATER THAN
U - APPROXIMATE
& - PLUS
\- - MINUS

INTERVALS OF NO FLARE PATROL OBSERVATIONS

APRIL 1958



Stations included:

Anacapri (Swedish)
Arcetri
Arosa
Athens
Climax
Greenwich Royal Observatory, Herstmonceux
Hawaii
Huancayo
Kodaikanal
McMath-Hulbert
Mitaka
Nizamiah
Ottawa
Royal Observatory, Edinburgh
Sacramento Peak
Uccle
U. S. Naval Research Laboratory
Zurich

SUBFLARES NOTED AS FOLLOWS, DATE - UNIVERSAL TIME - COORDINATES

MARCH 1958

ATHENS	01	0720	S15	E78
ATHENS	01	0729	S13	W51
WENDEL	01	1021 E	S12	W49
WENOEL	01	1225 E	S11	W49
WENDEL	01	1228 E	S16	E86
CAPRI S	01	1240 E	S12	W52
*WENDEL	01	1344 E	S16	E76
USNRL	01	1426	S23	W05
HAWAII	01	2236	S17	W56
USNRL	02	1326	S21	E70
CLIMAX	02	1959	S28	E70
USNRL	03	1414	S22	E55
USNRL	03	1506	S24	W32
CLIMAX	03	1605	S18	E46
CLIMAX	03	1630	S17	E50
USNRL	03	1632	S17	E52
USNRL	03	1659	S25	W32
*USNRL	03	1810	S22	E69
USNRL	03	1823	N33	W39
USNRL	03	1842	S18	E43
USNRL	03	1905	N34	W39
USNRL	03	1923	S12	W28
USNRL	03	1942	S22	W36
HAWAII	03	2100	S14	E52
USNRL	04	1300	S24	W44
*CAPRI S	04	1320 E	S26	W44
USNRL	04	1409	N35	W50
WENOEL	04	1452 E	N20	E52
USNRL	04	1520	N35	E20
WENOEL	04	1527 E	N20	E52
USNRL	04	1536	N15	E90
USNRL	04	1552	S18	E26
USNRL	04	1553	N25	E20
WENDEL	04	1605 E	S10	W40
WENOEL	04	1605 E	S18	E35
USNRL	04	1605	S09	W43
USNRL	04	1606	S21	E35
*CLIMAX	04	1715	S14	E42
USNRL	04	1745	N33	W52
AROSA	05	0858	S18	E29
*CAPRI S	05	1004 E	S21	E28
ONOREJOV	05	1137 E	S13	W49
WENDEL	05	1227 E	S18	E30
*CAPRI S	05	1315 E	S17	E27
USNRL	05	1458 E	S19	E26
CLIMAX	05	1526	S13	E30
OTTAWA	05	1529	S13	E29
SAC PEAK	05	1610 E	S13	W50
OTTAWA	05	1614	S17	E31
*SAC PEAK	05	1625	S13	E29
SAC PEAK	05	1640	S12	W51
*OTTAWA	05	1640 E	S20	E25
*OTTAWA	05	1647 E	N28	W65
SAC PEAK	05	1712	S13	E33
*CLIMAX	05	1720	S15	E29
SAC PEAK	05	1735	S21	E26
CLIMAX	05	1739	S25	E60
OTTAWA	05	1740 E	S15	E24
USNRL	05	1741 E	S17	E23
SAC PEAK	05	1742	N28	W64
CLIMAX	05	1753	S08	W57
SAC PEAK	05	1817	N25	E04
SAC PEAK	05	1830	S25	E25
SAC PEAK	05	1837	S16	E25
*SAC PEAK	05	1902 E	S06	W57
UCCLE	06	1023 E	S10	W65
*CLIMAX	06	1537	S20	E12
USNRL	06	1658 E	S12	W67
CLIMAX	06	1755	S21	E11
CLIMAX	06	1808	S22	E11
USNRL	06	1816 E	S22	E11
USNRL	06	1834 E	N25	W08
CLIMAX	06	1842	S18	E12
USNRL	06	1843 E	S17	E10
USNRL	06	1921	N25	W02
USNRL	06	2047 E	S18	E08
USNRL	06	2059	N32	W90
USNRL	06	2104 E	S16	E09
USNRL	07	1239 E	N32	W04
USNRL	07	1242	S10	W78
*OTTAWA	07	1329	S18	E00
USNRL	07	1415	N26	W21
USNRL	07	1447	N31	W06
USNRL	07	1628	N32	W08
OTTAWA	07	1628	N32	W08
USNRL	07	1633	N24	W22
USNRL	07	1633	S20	W02
USNRL	07	1650	N24	W23
USNRL	07	1712	N32	W10
USNRL	07	1735	S14	W81
USNRL	07	1740	N31	W10
OTTAWA	07	1756	S16	W80
USNRL	07	1757	S14	W82
USNRL	07	1854	N24	W22
*USNRL	07	1942	S13	W82
USNRL	07	2010	N24	W26
USNRL	07	2022	N25	W22
*USNRL	07	2032	S13	W82
ATHENS	08	0738	S18	W18
*NIZAMIAH	08	1050	S22	W14
USNRL	08	1233 E	S16	W12
USNRL	08	1340	N31	W13
USNRL	08	1425	S12	W90
USNRL	08	1449 E	S22	W14
SAC PEAK	08	1615	N10	E55
USNRL	08	1617	N09	E55
SAC PEAK	08	1702	N34	W19
SAC PEAK	08	1740	N26	W34
SAC PEAK	08	1757	N27	W33
SAC PEAK	08	1800	N10	E56
CLIMAX	08	1810 E	N11	E54
SAC PEAK	08	1855	S14	W90
HAWAII	08	2114	N36	W18
HAWAII	08	2138 E	N12	E52
HAWAII	08	2200	N36	W18
CLIMAX	08	2200	N34	W19
*SAC PEAK	08	2200	N08	E51
*SAC PEAK	08	2247	N09	E52
CLIMAX	08	2248	N34	W19
HAWAII	08	2248	N36	W18
ONDREJOV	09	1154	N10	E41
WENDEL	09	1200 E	N10	E41
*WENDEL	09	1220 E	N10	E45
USNRL	09	1230	N35	W28
USNRL	09	1316	N35	W25
*USNRL	09	1455 E	S17	W35
SAC PEAK	09	1455	N21	W57
OTTAWA	09	1516	N11	E39
SAC PEAK	09	1717	S14	W27
OTTAWA	09	1718	S15	W26
SAC PEAK	09	1805	N32	W36
SAC PEAK	09	1857	N10	E38
SAC PEAK	09	1940	S15	W32
HAWAII	09	2004	N15	E40
SAC PEAK	09	2102	S19	W39
HAWAII	09	2352	N19	E23
ATHENS	10	0715	N15	E46
*SAC PEAK	10	1421 E	N35	W40
SAC PEAK	10	1452	S22	W32
SAC PEAK	10	1522	N34	W45
SAC PEAK	10	1540	N34	W45
OTTAWA	10	1540	N32	W42
USNRL	10	1619	N17	E18
SAC PEAK	10	1632	N35	W45
CLIMAX	10	1634	N34	W44
OTTAWA	10	1635	N32	W43
USNRL	10	1723	N17	E38
CLIMAX	10	1727	N15	E38
SAC PEAK	10	1727 U	N17	E37
SAC PEAK	10	1730	N32	W44
CLIMAX	10	1734	N36	W43
USNRL	10	1735	N34	W42
SAC PEAK	10	1742	N25	W25
CLIMAX	10	1743	N23	W24
USNRL	10	1745	N25	W25
USNRL	10	1825	N13	E39
CLIMAX	10	1825	N14	E39
*HAWAII	10	1956	N36	W50
*USNRL	10	1956	N35	W44
USNRL	10	2023	S12	W48
HAWAII	10	2032	N18	E33
USNRL	10	2034	N15	E35
HAWAII	10	2038	N20	E08
USNRL	10	2038	N17	E12
USNRL	10	2057	S17	W52
ATHENS	11	0702 E	N30	W55
ATHENS	11	0725	N09	E15
ATHENS	11	0740	N16	E33
ATHENS	11	0804	N34	W50
UCCLE	11	0833 E	N14	E29
UCCLE	11	0839	S20	W58
USNRL	11	1345	N11	E23
USNRL	11	1349	N10	E15
USNRL	11	1411	N23	W36
USNRL	11	2100 E	N24	W37
ATHENS	12	0831 E	N18	E70
UCCLE	12	1007	S11	W70
USNRL	12	1441	N14	E14
USNRL	12	1451	N12	E90
USNRL	12	1512	N24	W49
USNRL	12	1542	S20	W70
USNRL	12	1552	N14	E14
USNRL	12	1611 E	N14	E13
USNRL	12	1637	N14	E12
USNRL	12	1637	S21	W59
CLIMAX	12	1701	N12	E90
USNRL	12	1703	N12	E90
CLIMAX	12	1830	N12	E11
USNRL	12	1831	N14	E12
USNRL	12	2029	N15	E11
NIZAMIAH	13	0344	N10	E07
OTTAWA	13	1310	N15	W02
SAC PEAK	13	1620	N14	W05
HAWAII	13	2022	N14	W02
ONOREJOV	14	0719 E	S13	W30
ONDREJOV	14	1237 E	N23	W70
UCCLE	15	0806	N12	W25
UCCLE	15	0813	N12	W28
*WENDEL	15	0835 E	N12	W25
UCCLE	15	1215	N37	E58
UCCLE	15	1219	N33	E63
UCCLE	15	1234	N12	W25
*USNRL	15	1343	N12	W27
USNRL	15	1408	N11	W29
USNRL	15	1516	N12	W28
SAC PEAK	15	1537	N22	W90
SAC PEAK	15	1540	N12	W08
*USNRL	15	1541	N12	W30
USNRL	15	1557	N22	W90
SAC PEAK	15	1607	N38	E53
UCCLE	15	1609	N13	W33
SAC PEAK	15	1717	N13	W29
SAC PEAK	15	1805	N13	W30
SAC PEAK	15	1807	N22	W90
SAC PEAK	15	1907	N10	E38
SAC PEAK	15	1915	N13	W30
SAC PEAK	15	1935	N13	W30
SAC PEAK	15	2012	N13	W30
SAC PEAK	15	2110	N13	W30
HAWAII	15	2112	N12	W31
SAC PEAK	15	2112	S06	E88
SAC PEAK	15	2150	N12	W31
HAWAII	15	2152 E	N10	W32
SAC PEAK	15	2210	N13	W31
HAWAII	15	2212	N12	W31
SAC PEAK	15	2255	N42	E35
UCCLE	16	0825	N15	E20
UCCLE	16	1110	N08	E30
USNRL	16	1305	N11	W45
USNRL	16	1310	N12	E24
USNRL	16	1346	N12	E24
*USNRL	16	1350	N13	E25
*WENOEL	16	1358 E	N12	E24
USNRL	16	1402 E	N11	E24
USNRL	16	1409	N16	W42
USNRL	16	1517 E	N15	E25
USNRL	16	1543 E	N14	W42
USNRL	16	1602	N09	W53
USNRL	16	1603	N14	E25
USNRL	16	1624	N14	E25
UCCLE	17	0852 E	N40	E54
*USNRL	17	1216	N36	E35
USNRL	17	1315	N22	E70
CAPRI S	17	1317 E	N25	E71
UCCLE	17	1515 E	N13	E11
UCCLE	17	1515 E	N15	E09
UCCLE	17	1515 E	N10	E15
UCCLE	17	1539	N14	E87
USNRL	17	1807	N22	E66
USNRL	17	1958	N12	W84
WENDEL	18	0909 E	N22	E63
UCCLE	18	1118	N14	W01
WENOEL	18	1300 E	N22	E52
SAC PEAK	18	1857	N27	W70
SAC PEAK	18	2205	N10	W90
SAC PEAK	18	2312	N27	W79
SAC PEAK	18	2325	N10	W90
R O HERST	19	1115 E	N12	W13
SAC PEAK	19	1512	N21	E55
SAC PEAK	19	1545	N22	E41
SAC PEAK	19	1647	N23	E36
SAC PEAK	19	2238 U	N46	W88
*ATHENS	20	0700 E	N27	E58
*ONDREJOV	20	0759 E	N21	E28
ONOREJOV	20	0830 E	N22	E32
UCCLE	20	1108	N20	W35
MEUDON	20	1136	N25	E25
MEUOON	20	1143	N08	E45
SAC PEAK	20	1405	N13	W32
SAC PEAK	20	1700	N48	W90
SAC PEAK	20	1700	N22	E26
SAC PEAK	20	2040	N16	W34
ATHENS	21	0717	N24	E17
UCCLE	21	0856	N19	E17
UCCLE	21	1041 E	N22	E18
* MEUDON	21	1411	N22	E15
* SAC PEAK	21	1411 E	N22	E13
SAC PEAK	21	1522	N21	E15
CAPRI S	21	1527 E	N23	E14
UCCLE	21	1553	N23	E20
SAC PEAK	21	1612	S16	E90
SAC PEAK	21	1721 E	S14	E90
SAC PEAK	21	1802	N21	E12
SAC PEAK	21	1830 U	S15	E90
* USNRL	21	1920 E	N22	E13
SAC PEAK	21	2317 U	N19	W55
SAC PEAK	21	2347 E	S12	E90
NIZAMIAH	22	0541	N17	E61
MEUOON	22	1057	N08	E64
MEUOON	22	1057	S05	E71
* CAPRI S	22	1129 E	N23	E06
USNRL	22	1335 E	S24	E90
USNRL	22	1351	N18	W63

*Rated as flare of importance ≥ 1 by other observatories (See CRPL-F 164 Part B).

SUBFLARES NOTED AS FOLLOWS, DATE - UNIVERSAL TIME - COORDINATES

MARCH 1958

USNRL	22	1624	N25	E22
UCCLE	23	0908	S20	E87
WENOEL	23	1101 E	S11	E70
USNRL	23	1228	N22	W13
SAC PEAK	23	1355 O	S12	E90
SAC PEAK	23	1457	N25	W04
USNRL	23	1458	N26	W06
USNRL	23	1501	N24	E05
USNRL	23	1513	N26	W06
SAC PEAK	23	1655	N15	E41
SAC PEAK	23	1715	N23	E04
HAWAII	23	1830	N25	E01
SAC PEAK	23	1951 E	S22	E90
SAC PEAK	23	2015	N23	E03
SAC PEAK	23	2045	N23	E02
SAC PEAK	23	2335	N25	W23
*ATHENS	24	0645	N20	W24
ATHENS	24	0650 E	N37	W53
UCCLE	24	0830	N08	W89
WENOEL	24	0851 E	N19	W29
*WENOEL	24	0918 E	S17	E64
WENOEL	24	1013 E	N19	W26
WENOEL	24	1130 E	N25	W16
USNRL	24	1210 E	N20	W30
*USNRL	24	1235	N20	W29
*UCCLE	24	1310	N20	W30
UCCLE	24	1406	S22	E79
WENOEL	24	1433 E	N19	W28
UCCLE	24	1436	N20	W30
HAWAII	24	2302	N19	E23
NIZAMIAH	25	0257 E	N20	W35
WENOEL	25	0744 E	N21	W31
WENDEL	25	0919 E	N25	W05
ONOREJOV	25	0944	S24	E60
UCCLE	25	1043 E	N27	W31
UCCLE	25	1044	N29	W06
UCCLE	25	1044	N25	W12
UCCLE	25	1058	S09	E50
*WENOEL	25	1124 E	S23	E61
WENOEL	25	1249 E	S22	E63
UCCLE	25	1308	S23	E62
UCCLE	25	1333 E	S15	E51
UCCLE	25	1521	S22	E64
SAC PEAK	25	1932 E	S18	E46
SAC PEAK	25	2335	S22	E61
OTTAWA	26	1415	S06	E09
OTTAWA	26	1421	N18	W54
OTTAWA	26	1535	S08	E07
SAC PEAK	26	2305	S07	E02
HAWAII	26	2308	S08	E03
AROSA	27	0820	N22	W67
ZURICH	27	0820 E	N23	W54
ZURICH	27	0820 E	N22	W62
UCCLE	27	0827	S20	E26
WENOEL	27	0834 E	N24	W55
UCCLE	27	0835	N23	W68
UCCLE	27	0835	N25	W60
UCCLE	27	0906	S25	E45
*UCCLE	27	0908	S28	E36
UCCLE	27	0944 E	S16	E36
UCCLE	27	1029 E	N25	W46
UCCLE	27	1106	S16	E25
UCCLE	27	1106	S20	E33
UCCLE	27	1110	S16	E83
OTTAWA	27	1249	S24	W41
WENOEL	27	1316 E	S24	E40
OTTAWA	27	1319	S23	E39
OTTAWA	27	1322	S16	E34
WENOEL	27	1324 E	S14	E19
SAC PEAK	27	1402	S19	E80
SAC PEAK	27	1402	N25	W76
SAC PEAK	27	1410	S16	E23
OTTAWA	27	1410	S15	E22
ONOREJOV	27	1411	S18	E22
*OTTAWA	27	1414	N23	W67
*OTTAWA	27	1505	S24	E37
*SAC PEAK	27	1505	S24	E39
*SAC PEAK	27	1505	S30	E29
*OTTAWA	27	1506	S27	E30
SAC PEAK	27	1632	N24	W75
SAC PEAK	27	1700	N24	W62
*SAC PEAK	27	1700	S25	E38
SAC PEAK	27	1705	S28	E25
SAC PEAK	27	1747	N25	W42
OTTAWA	27	2008	S06	W01
SAC PEAK	27	2027	N25	W79
SAC PEAK	27	2302	S25	E34
SAC PEAK	27	2407	N35	E90
UCCLE	28	0725	S16	E17
ATHENS	28	0727	N23	W62
*WENOEL	28	0843 E	S23	E24
WENOEL	28	0843 E	S24	E31
WENOEL	28	0848 E	N24	W38
UCCLE	28	0952 E	S16	E17
WENOEL	28	0955 E	S14	E14
*USNRL	28	1305	N36	E90
USNRL	28	1317	N27	W89
UCCLE	28	1406 E	S16	E75
*SAC PEAK	28	1427	N22	W88
*USNRL	28	1429	N22	W90
SAC PEAK	28	1450	N22	W89
USNRL	28	1452	N21	W90
USNRL	28	1512	N28	W90
USNRL	28	1604	N20	W90
USNRL	28	1645	N27	W90
SAC PEAK	28	1947	N28	W90
OTTAWA	28	2024	N24	W60
SAC PEAK	28	2028 E	N26	W60
OTTAWA	28	2124	S24	E13
SAC PEAK	28	2150 E	S08	E02
SAC PEAK	28	2217	S07	W17
SAC PEAK	28	2222	N28	W62
SAC PEAK	28	2247	N24	W90
SAC PEAK	28	2327	S07	E06
AROSA	29	0657	N23	W90
AROSA	29	0657	S15	W01
WENOEL	29	0659 E	N23	W48
MEUDON	29	0758	N23	W63
WENOEL	29	0803 E	N26	W63
UCCLE	29	0906 E	N27	W70
UCCLE	29	0906 E	S18	W02
WENOEL	29	0959 E	S08	W03
*MEUDON	29	1031	S06	E05
*WENOEL	29	1044 E	N26	E66
UCCLE	29	1114	S22	W35
UCCLE	29	1131	S08	W08
WENOEL	29	1218 E	S22	E09
*OTTAWA	29	1223 E	S22	E15
*R O HERST	29	1226 E	S23	E16
OTTAWA	29	1314	S08	W08
*USNRL	29	1341	N36	E80
*USNRL	29	1353	S17	E90
SAC PEAK	29	1401 E	N35	E80
*SAC PEAK	29	1405	S15	E57
*USNRL	29	1407	S14	E60
*SAC PEAK	29	1432	S17	W06
ONOREJOV	29	1441 E	S10	W03
SAC PEAK	29	1447	S08	W12
*SAC PEAK	29	1447	N27	W70
*SAC PEAK	29	1505	S08	W12
SAC PEAK	29	1507	N19	W90
SAC PEAK	29	1545	N20	W90
SAC PEAK	29	1545	S18	E85
USNRL	29	1548	N20	W90
SAC PEAK	29	1622	N22	E90
SAC PEAK	29	1630	N21	W90
USNRL	29	1631	N20	W90
SAC PEAK	29	1642	N20	W90
SAC PEAK	29	1652	S18	E80
USNRL	29	1655 E	S16	E79
SAC PEAK	29	1710	N32	E90
SAC PEAK	29	1750	S05	W33
SAC PEAK	29	1820	N35	E89
SAC PEAK	29	2002	N33	E89
SAC PEAK	29	2135	S24	E00
SAC PEAK	29	2320	N24	W88
SAC PEAK	29	2340	S07	W11
WENOEL	30	0806 E	N34	E69
*UCCLE	30	0822	S15	W15
WENOEL	30	0902 E	N33	E64
WENOEL	30	0932 E	S22	W05
WENOEL	30	0940 E	N23	W65
WENOEL	30	0953 E	S07	W12
ZURICH	30	0954	S06	W09
UCCLE	30	1000	S22	W05
ZURICH	30	1032	S14	W14
ZURICH	30	1036	S08	W14
WENOEL	30	1044 E	N33	E63
*WENOEL	30	1115 E	S24	E04
WENOEL	30	1129 E	N33	E63
WENOEL	30	1205 E	N34	E66
OTTAWA	30	1332	S05	W15
SAC PEAK	30	1402	N35	E66
SAC PEAK	30	1402	S15	W16
WENOEL	30	1406 E	N33	E62
OTTAWA	30	1410	S14	W16
OTTAWA	30	1411	N36	E61
* SAC PEAK	30	1422	S07	W17
* WENOEL	30	1423 E	S08	W16
* WENOEL	30	1454 E	S20	W07
* SAC PEAK	30	1455	S19	W07
WENOEL	30	1456 E	N33	E62
SAC PEAK	30	1457	N35	E61
OTTAWA	30	1501	S19	W07
OTTAWA	30	1504	N37	E62
WENOEL	30	1514 E	S20	W07
SAC PEAK	30	1532	N34	E62
* SAC PEAK	30	1537	N34	E60
UCCLE	30	1539	N24	E88
OTTAWA	30	1545	N36	E59
SAC PEAK	30	1557	S08	W18
WENOEL	30	1559 E	S08	W16
OTTAWA	30	1605 E	S06	W42
OTTAWA	30	1605 E	S09	W17
SAC PEAK	30	1615	N36	E60
SAC PEAK	30	1645	S14	W21
SAC PEAK	30	1650	N35	E60
OTTAWA	30	1654 E	N37	E62
OTTAWA	30	1654 E	S13	W19
SAC PEAK	30	1715	N26	W90
SAC PEAK	30	1720	S24	W01
SAC PEAK	30	1727	N35	E64
SAC PEAK	30	1805	S07	W18
SAC PEAK	30	1827	N37	E63
SAC PEAK	30	1857	N16	W54
SAC PEAK	30	1907	N35	E60
* SAC PEAK	30	2032	S07	W19
SAC PEAK	30	2100	S07	W19
* SAC PEAK	30	2155	N36	E60
CAPRI S	31	0800 E	S14	W30
*CAPRI S	31	0859	S20	E28
*NIZAMIAH	31	1025 E	S10	W27
UCCLE	31	1112 E	S19	E28
UCCLE	31	1112 E	S08	W26
UCCLE	31	1112 E	N37	E52
UCCLE	31	1144	N22	E66
UCCLE	31	1208	N23	W66
UCCLE	31	1213	S08	W64
UCCLE	31	1213	S22	W90
OTTAWA	31	1215 E	S08	W57
OTTAWA	31	1220	S07	W29
OTTAWA	31	1221	S15	W29
UCCLE	31	1224	S15	W32
UCCLE	31	1237	N07	E18
OTTAWA	31	1243	S14	W38
UCCLE	31	1244	S14	W40
UCCLE	31	1248	S15	E25
UCCLE	31	1255	S08	W40
UCCLE	31	1255 E	S05	W32
OTTAWA	31	1255	S07	W29
UCCLE	31	1326	N20	W45
UCCLE	31	1333	N34	E54
UCCLE	31	1341	S06	W63
UCCLE	31	1349	S13	W39
OTTAWA	31	1349	S14	W37
OTTAWA	31	1357	S14	W31
SAC PEAK	31	1410 E	S20	E25
SAC PEAK	31	1410	S13	W34
UCCLE	31	1416	S19	E26
*SAC PEAK	31	1442	S06	W65
UCCLE	31	1444	S09	W31
SAC PEAK	31	1445	S08	W31
SAC PEAK	31	1447	N38	E50
UCCLE	31	1448	N38	E50
SAC PEAK	31	1517	S09	W69
*SAC PEAK	31	1522	S12	W41
*OTTAWA	31	1523 E	S12	W65
UCCLE	31	1523	S09	W70
OTTAWA	31	1528 E	S14	W39
OTTAWA	31	1533	S11	W40
UCCLE	31	1534	S10	W42
UCCLE	31	1534	S09	W70
UCCLE	31	1551	N05	E15
UCCLE	31	1555	S15	E20
UCCLE	31	1601	S18	W31
SAC PEAK	31	1645	S13	W41
SAC PEAK	31	1727	S12	W34
SAC PEAK	31	1740	N36	E54
SAC PEAK	31	1750	S12	W42
SAC PEAK	31	1757	N20	E56
SAC PEAK	31	1802	S06	W58
SAC PEAK	31	1822	S12	W43
SAC PEAK	31	1900	S05	W62
SAC PEAK	31	1910	S12	W43
SAC PEAK	31	2002	S08	W35

IONOSPHERIC EFFECTS OF SOLAR FLARES

(SHORT-WAVE RADIO FADEOUTS)

MARCH 1958

Mar. 1958	Start UT	End UT	Type	Wide Spread Index	Importance	Observation Stations	Known Flare, UT CRPL-F 164B
1	0120	0154	Slow S-SWF	3	1+	AN, OK	*
1	0340	0515	Slow S-SWF	5	3	AD, KO, OK, SY, TO, CW+	
1	0913	0925	S-SWF	4	2+	JU, KO, NE, CW**, CW***	0911
1	0929	0959	S-SWF	4	2	JU, KO, NE, CW**	0925
1	1649	1725	S-SWF	5	2+	BE, HU, MC, NE, PR, WS	*
3	1010	1145	S-SWF	5	3+	MA, NE, PU, SW, TO, CW**, ***	1008E
6	0737	0758	S-SWF	4	2	KO, NE, PU	
7	1047	1130	S-SWF	3	2	NE, CW**	1030
8	1326	1355	S-SWF	5	2	BE, HU, MC, NE, PR, WS	
8	1620	1635	Slow S-SWF	3	1-	BE, MC, PR	
8	1723	1740	S-SWF	5	2+	BE, CR, HU, MC, PR, WS	1720
8	1805	1825	S-SWF	5	1+	BE, CR, HU, MC, PR, WS	
8	1900	1925	Slow S-SWF	4	1+	BE, CR, MC, PR, WS	
8	2102	2130	Slow S-SWF	4	2	AN, BE, HU, MC, PR, WS	
9	0128	0156	S-SWF	3	1+	AD, OK	
9	0211	0306	G-SWF	3	1+	AD, OK	0210E
9	1141	1159	Slow S-SWF	3	2	NE, PU	1145E
9	1542	1703	S-SWF	5	3	BE, CR, HU, MA, MC, NE, PR, PU, WS, CW**	1540
9	1900	1920	Slow S-SWF	4	1	BE, CR, HU, MC, PR, WS	
9	2003	2030	S-SWF	5	2+	AN, BE, CR, HU, MC, PR, TO, WS	1957
10	0205	0314	G-SWF	3	2	OK, TO	0208
10	0400	0500	G-SWF	1	2	OK	
10	0708	0730	Slow S-SWF	5	2+	JU, OK, CW+, CW**	0709E
10	1319	1401	G-SWF	5	2	MC, PR, PU	1316E
10	1412	1429	S-SWF	4	1+	PR, PU	1408
10	1717	1810	G-SWF	3	1	MC, PR, WS	1710
10	2025	2055	G-SWF	4	1	AD, MC, PR, WS	2024
11	0048	0320	S-SWF	3	3	AN, OK	0030E
11	1510	1800	Slow S-SWF	5	3	BE, CR, HU, MC, PR, WS, CW*	
12	0052	0439	G-SWF	1	3+	OK	0043E
12	1430	1520	Slow-S-SWF	5	2+	BE, CR, HU, MA, MC, NE, PR, WS, CW*, **, ***, RCA*	1436E
14	1455	1705	Slow-S-SWF	5	3	BE, CR, HU, MA, MC, NE, PR, SW, WS, CW**, ***	1504E
15	1538	1556	Slow-S-SWF	5	1+	HU, JU, MC, PR, WS	1541E
16	1533	1550	Slow-S-SWF	5	1+	JU, MC, PR	
18	1720	1740	Slow-S-SWF	4	1	BE, CR, HU, MC, PR, WS	*
18	1901	2040	G-SWF	3	2+	BE, CR, MC	1905E
19	1730	1750	Slow-S-SWF	3	1	HU, PR, WS	*
20	0642	0810	S-SWF	4	3	PU, CW+	0656E
20	1302	1335	G-SWF	3	2	NE, PR, *, **	1259
20	1452	1553	S-SWF	5	2+	BE, HU, NE, PR, PU, WS, RCA*, CW***	1445
20	2040	2120	S-SWF	4	2	AD, BE, HU, PR, WS	2025
21	1022	1049	S-SWF	4	2	KO, NE, SW, CW**, ***	1019
21	1415	1430	S-SWF	5	2-	BE, HU, PR, PU	1413
21	1522	1550	S-SWF	5	2+	BE, CR, HU, MC, PR, PU, WS	
21	1700	1715	Slow S-SWF	3	2	HU, MC, PR	*
21	1715	1735	Slow S-SWF	4	2	BE, CR, MC, PR, WS	*
21	1852	1926	Slow S-SWF	4	2+	BE, CR, HU, PR, WS	1850
22	0000	0015	S-SWF	3	1	CA, OK	
22	0052	0110	G-SWF	3	1	AD, CA	
22	0206	0506	S-SWF	5	2+	AD, CA, OK, TO, CW+	*
22	0926	1022	Slow S-SWF	1	2	NE	0925E
22	1128	1155	G-SWF	4	2	MA, PR, SW, CW**, ***	1123E
22	1235	1310	S-SWF	5	2	BE, HU, JU, MC, NE, PR, SW, CW**, ***	
22	1810	1843	G-SWF	3	1+	MC, PR, WS	*
22	2341	0029	Slow S-SWF	5	2+	AD, CA, TO, WS	*
23	0845	0857	S-SWF	1	1	NE	0844
23	0953	1309	S-SWF	5	3	KO, MA, NE, PR, SW, RCA*, CW**, ***	0950
23	1825	1915	S-SWF	4	1+	BE, HU, MC, PR, WS	1826
24	0302	0420	S-SWF	4	2	CA, KO, TO, CW+	*
24	0749	0814	S-SWF	1	1	KU	0749E

IONOSPHERIC EFFECTS OF SOLAR FLARES

(SHORT-WAVE RADIO FADEOUTS)

MARCH 1958

Mar. 1958	Start UT	End UT	Type	Wide Spread Index	Importance	Observation Stations	Known Flare, UT CRPL-F 164B
24	0958	1008	S-SWF	1	1	NE	0953
24	1542	1652	G-SWF	4	2+	BE, CR, HU, MC, PR, WS	1607E
24	2305	2400	Slow S-SWF	5	2	AD, CA, TO, WS	2306
25	0525	0600	Slow S-SWF	4	2	KO, OK	0529E
25	0603	0630	Slow S-SWF	5	2	KO, KU, OK, CW**	0557E
25	1452	1543	Slow S-SWF	5	1+	BE, HU, JU, MC, PR, WS	1449
26	2330	2355	G-SWF	4	2+	AD, TO, WS	2327
27	1200	1230	S-SWF	1	1+	NE	1201E
27	1535	1658	S-SWF	5	3	BE, DA, HU, MC, NE, PR, PU, SW, WS, RCA*, CW***, CW+	1535
27	1702	1725	S-SWF	5	2	BE, HU, MC, NE, PR, WS	1702
28	0420	0439	S-SWF	1	2	OK	*
28	0502	0530	Slow S-SWF	1	2	OK	
28	0606	0625	Slow S-SWF	1	1-	OK	
28	1000	1023	S-SWF	1	3+	JU	1000
28	1034	1115	S-SWF	5	3+	DA, JU, KU, MA, NE, SW, CW***	1032
28	1149	1239	S-SWF	3	3	JU, NE	1145E
28	1602	1625	Slow S-SWF	4	1	BE, MC, PR, WS	1547
28	1635	1652	G-SWF	3	1	MC, PR, WS	
28	1708	1818	S-SWF	5	3	AN, BE, HU, MC, NE, PR, PU, WS, RCA*, CW***	1707E
28	1833	1900	S-SWF	5	2+	BE, HU, MC, PR, WS	1833
28	2024	2040	Slow S-SWF	4	1	AD, MC, PR, WS	
28	2042	2108	S-SWF	4	2+	AD, BE, HU, MC, PR, WS, RCA+	2042
29	0757	0818	S-SWF	5	3	KO, NE, OK	
29	1220	1245	S-SWF	4	2	BE, JU, NE, PR, SW	1217E
29	1340	1415	S-SWF	5	3	BE, CR, HU, MC, NE, PR, PU, SW, WS, RCA*, CW***, CW+++	1339
29	1448	1502	S-SWF	5	2	BE, JU, MA, MC, PR, PU, WS	1448E
29	1628	1730	S-SWF	5	3	BE, HU, JU, MC, NE, PR, PU, WS, RCA* CW**	
29	1821	1920	S-SWF	5	3	BE, HU, MC, NE, PR, SW, WS RCA+, RCA*, CW**	1820
29	2130	2155	S-SWF	5	2+	AD, AN, BE, CA, HU, MC, PR, WS, RCA+	2132E
30	0018	0040	Slow S-SWF	5	1	OK, PO, WS	0021E
30	0109	0121	S-SWF	5	2	AD, AN, OK, PO, TO, CW+	0102E
30	0500	0505	S-SWF	5	1	OK, PO	0456E
30	0842	0916	S-SWF	1	3+	JU	0842
30	0955	1045	S-SWF	4	3	NE, SW, CW***, CW+++	0944
30	1552	1610	S-SWF	2	1	MC, PR	1533
30	1613	1640	G-SWF	3	1	MC, PR, WS	1614E
30	1742	1845	G-SWF	4	1+	AN, BE, MC, PR, WS	1740
30	1905	1932	Slow S-SWF	4	1-	AN, BE, MC, PR, WS	
30	2302	2320	Slow S-SWF	5	1+	AD, PO, WS	2304
31	0006	0050	G-SWF	5	2+	AD, CA, OK, WS	0005
31	0050	0210	S-SWF	5	3+	AD, CA, OK, CW+	
31	0756	0814	Slow S-SWF	4	2	KO, OK	
31	1420	1435	S-SWF	5	1-	BE, MC, PR, PU	
31	1438	1453	S-SWF	5	1+	BE, PR, PU, WS	
31	1935	1952	Slow S-SWF	2	1	MC, WS	1932

* No known flare patrol at this time.

CA = Canberra, Australia
CR = Cornell University, N.Y.
DA = Darmstadt, G.F.R.
JU = Juhlesruh, G.D.R.
KO = Kodaikanal.
KU = Kuhlungsborn
MA = Madrid, Spain
NE = Nederhorst den Berg, Netherlands.
PO = Potsdam
PU = Prague, Czech.
SW = Enkoping, Sweden
SY = Sydney, Australia
TO = Hiraiso Radio Wave Observatory, Japan.
CW* = Cable and Wireless, Barbadoes
CW** = Cable and Wireless, Somerton, England.
CW*** = Cable and Wireless, Brentwood, England
CW+ = Cable and Wireless, Hong Kong.
CW+++ = Cable and Wireless, Accra
RCA* = RCA Communications Inc., Riverhead, N.Y.
RCA+ = RCA Communications Inc., Pt. Reyes, Calif.

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

APRIL 1958

OTTAWA — 2800 MC

Apr. 1958	Type*	Start UT Hrs:Mins	Duration Hrs:Mins	Maximum Time UT Hrs:Mins	Maximum Peak Flux	Remarks
1	2 Simple 2	b10 53	>7	10 54.5	475	in sunrise
1	3 Simple 3 A	12 08.5	2 25	indet	30	
	6 Complex	12 08.5	9	12 11	20	
	2 Simple 2 f	14 11.8	13	14 13.9	195	
1	1 Simple 1	15 37.7	4	15 38.3	7	
1	2 Simple 2 f	16 32.5	3.5	16 34	18	
1	2 Simple 2	18 09	4	18 10	65	
1	2 Simple 2	22 52.5	1	22 53	51	
2	2 Simple 2	11 49.5	2.5	11 50	55	
2	2 Simple 2	13 25.2	2	13 26.2	13	
2	2 Simple 2 f	13 54.5	2	13 55	18	
2	1 Simple 1	14 25	1	14 25.5	7	
2	3 Simple 3 f A	15 00	2 10	indet	14	
	8 Group (2)	15 31	17			
	2 Simple 2	15 31	2.5	15 31.7	10	
	6 Complex	15 40	8	15 44.3	70	
2	9 Precursor	17 25	1		10	
	2 Simple 2	17 26	2.5	17 26.5	96	
	4 Post Increase		5		8	
2	2 Simple 2 f	18 05.5	10	18 08.9	110	
	4 Post Increase		10		9	
2	6 Complex f	19 51.5	7.5	19 53.4	260	
	4 Post Increase		18		12	
2	8 Group (2)	20 43	9.8			
	2 Simple 2	20 43	2	20 44	12	
	2 Simple 2	20 52.3	0.5	20 52.5	10	
3	3 Simple 3	17 44	9	17 48.5	7	
3	3 Simple 3 f	18 32	2 30	indet.	15	
4	2 Simple 2	13 05.5	1	13 05.9	16	
4	2 Simple 2	13 26.6	1	13 27	21	
4	8 Group (2)	19 20.5	5.5			
	2 Simple 2	19 20.5	1.5	19 21	48	
	2 Simple 2	19 24	2	19 24.9	26	
5	8 Group (2)	13 52	22.5			
	2 Simple 2 f	13 52	12.5	13 55.5	38	
	6 Complex f	14 04.5	10	14 07.8	60	
5	2 Simple 2	18 07.5	1	18 08	25	
5	1 Simple 1	18 39	2	18 40	6	
5	8 Group (2)	19 27.5	5.4			
	2 Simple 2	19 27.5	0.5	19 27.7	16	
	6 Complex	19 30.4	2.5	19 30.6	11	
5	2 Simple 2	22 51.5	3.5	22 52.5	10	
6	1 Simple 1	14 31	2.5	14 32	7	
6	6 Complex	19 34	12	19 36.8	13	
7	1 Simple 1	20 31	6	20 34	6	
9	2 Simple 2	13 46	2.5	13 47	11	
9	2 Simple 2	14 35.8	3.5	14 36.8	31	
	4 Post Increase		25		5	
9	2 Simple 2	21 47.2	2	21 47.8	9	
10	2 Simple 2	16 17	2	16 18.2	14	
	4 Post Increase		6		4	

COMMERCE – STANDARDS – BOULDER

SOLAR RADIO EMISSION

OUTSTANDING OCCURRENCES

APRIL 1958

OTTAWA

2800 MC

Apr. 1958	Type*	Start UT Hrs:Mins	Duration Hrs:Mins	Maximum Time UT Hrs:Mins	Maximum Peak Flux	Remarks
10	1 Simple 1	21 03	2	21 04	3	
10	6 Complex f	22 17	6	22 21	17	
11	2 Simple 2	11 14.5	2	11 15.7	8	
11	2 Simple 2	11 41.2	6	11 42.3	28	
11	1 Simple 1	11 55	2	11 56	4	
11	1 Simple 1	12 51.5	4	12 52	5	
11	8 Group (2)	13 30.5	9			
	1 Simple 1	13 30.5	3	13 32	7	
	2 Simple 2 f	13 35.5	4	13 37.5	62	
11	8 Group (2)	15 54.5	8			
	2 Simple 2	15 54.5	4	15 55.2	10	
	1 Simple 1	16 00	2.5	16 01.1	3	
12	1 Simple 1	17 00	6	17 00.9	6	
15	2 Simple 2	12 27	2	12 27.4	18	
19	1 Simple 1	22 19.9	1	22 20.2	7	
19	2 Simple 2	22 48.2	3	22 49	12	
20	2 Simple 2	13 51	0.4	13 51.1	11	
20	2 Simple 2	15 05.8	0.4	15 05 9	8	
21	6 Complex	20 49.3	3.5	20 50.2	17	
23	6 Complex	18 53	8	18 57.5	13	
24	2 Simple 2	16 21.3	1	16 21.8	10	
26	2 Simple 2	10 49.5	3	10 50.4	18	
27	1 Simple 1 f	18 04	2	18 04.5	5	
28	8 Group (2)	17 21	6.5			
	1 Simple 1	17 21	2	17 22	3	
	2 Simple 2	17 24.5	3	17 25.7	9	
28	6 Complex	23 18.5	6	23 20.4	97	in sunset osc.
29	8 Group (2)	10 50	11			
	1 Simple 1	10 50	2.5	10 51	7	
	1 Simple 1	10 58	3	10 59.5	7	
29	2 Simple 2	11 54.1	2	11 54.7	74	
29	1 Simple 1	12 13.8	0.5	12 14	5	
29	2 Simple 2 f	13 06	2.5	13 07.5	12	
29	8 Group (2)	13 22.1	5.4			
	2 Simple 2	13 22.1	1.5	13 22.8	26	
	1 Simple 1	13 26.5	1	13 26.8	7	
29	2 Simple 2	14 48.8	0.7	14 48.9	14	
29	8 Group (2)	16 54.8	1.6			
	1 Simple 1	16 54.8	0.3	16 54.9	6	
	1 Simple 1	16 55.7	0.7	16 55.9	7	
29	3 Simple 3 A	18 52	2 10	indet.	27	
	1 Simple 1	19 57.6	1	19 57.9	6	
30	1 Simple 1	17 14.8	1.5	17 15.2	4	
30	2 Simple 2	18 39.5	3	18 40.5	14	
30	3 Simple 3 f	19 20	40	19 31	15	

SOLAR RADIO EMISSION

DAILY DATA

APRIL 1958

CORNELL 200 MC

Apr. 1958	Flux Density 10^{-22} w m^{-2}(c/s)$^{-1}$ Hours UT 12–15	15–18	18–21	Variability 0 to 3 Hours UT 12–15	15–18	18–21	Observing Periods Hours UT
1	[37	35	39	[1	1	2	1335-2100
2	[20	29	27	[2	2	2	1335-2100
3	[13	16	17	[1	2	2	1340-2045
4	[20	18]	15	[1	1]	1	1340-1715, {1800-2015, 2020-2100
5	[15	17]		[1	1]		1335-1705
6	[14	14]		[1	1]		1335-1715
7	[20	16	14	[1	2	1	1325-2010, 2020-2100
8	[13	12	12]	[1	0	0]	1340-1940
9	[16	12	14	[2	1	1	1335-2110
10	[[14	13	12	[[1	1	1	1415-2100
11	[[12	13	13	[[1	1	2	1350-1925
12	[[12	12	12]]	[[0	1	0]]	1340-1910
13	[12	12]		[1	1]		1330-1700
14	[[12	12	12	[[1	1	0	1345-2100
15	[12	12	12	[0	0	0	1335-2100
16	[[12	11	11	[[0	1	1	1430-1940
17	[13	13	12	[1	1	1	1330-2100
18	[11	11	11	[0	0	0	1330-2100
19	[11	11	11	[0	1	1	1320-2110
20	[11	11]		[1	1]		1340-1700
21	[11	12	12	[0	0	0	1330-2115
22	[14	12	11	[1	1	0	1330-2100
23	[12	12	12]]	[1	0	0]]	1330-2105
24	[11	11	11	[0	1	1	1340-2100
25	[12	14	13	[0	1	1	1340-1500, 1530-2105
26	[13	13]		[1	1]		1305-1700
27	[[12	12]]		[[1	1]]		1350-1615

COMMERCE – STANDARDS – BOULDER

[= first hour missing.
[[= first two hours missing.
] = last hour missing.
]] = last two hours missing.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
APRIL 1958

CORNELL — 200 MC

Apr. 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density 10^{-22} w $m^{-2}(c/s)^{-1}$ Inst.	Smooth	Remarks
1	8	1538	1538*	1.5	CA	3100*	1700*	
	2	1632	1634.5*	4.5	CA			
	2	2002	2006.5*	6	CA			
	8	2035	2036.5	4	CA	530*	260*	
2	2	1353.5	1538*	6.5	CA	880*	630*	
	8*	1539.5*	1540*	1*	CA*	2400*	1700*	
	8	1608.5	1609*	6	ECA*	4400*	1700*	
	2	1740	1743.5*	7	CA	530*	380*	
	2	1838.5	1844*	9	CA	1200*	740*	
	8	1852.5	1852.5*	1.5	CA	1000*	630*	
	8	1945.5	1946*	2	CA	2000*	1500*	
	8	1951.5	1952*	2	ECD	82,000*	58,000*	
	8	1955	1957*	20	CD	25,000*	14,000*	these two may be considered a major +(9)
	0	2021		>39	SA			
3	7,4	1603.5		235	E			
4	3	1628		1	CA	~65		off-scale on linear record
	8	1641.5	1642	2	CA	~65		
	8	1855	1858*	5	ECD	140*	91*	
	8	1921	1921*1923*	6	ECD	91*	55*	
	2	2011	2013*	3.5	CA	91*	55*	
5	0	1359		71	SD			
	8	1403.5		6	ECD	~65		off-scale on linear record
7	3	1507		2	CD	46	25	
	2	1516		5	CD	49	25	
	1	1639.5		70	F			
	2	1808	1815.5*	11	F	120*	55*	
		1942	1942*	1		1700*	1500*	
8	1	1346		65	F			
9	6,4	b1335		>89	F			
	1	1636.5		45	E			
	3	1653.5	1653.5*	1.5	CA	91*	55*	
	2	1816		36	F			
	7	1943		>86	E			
	3	1947.5	1947.5*	1	CA	91*	72*	
10	2	1644	1644.5*	2	CD	450*	310*	
	2	1651.5	1652.5	2	CD	49	25	
	3	1659.5		.5	CD	40	23	
	3	1743	1743.5*	.5	CD	120*	72*	
	3	1829		0.25	CD	52	36	
13	3	1531.5	1532.5*	1.5	CD	210*	140*	
	3	1635	1635*	.5	CD	91*	72*	
14	3	1408.5	1409	1	CD	~65		off-scale on linear record
	3	1512	1512*	1.5	CD	91*	55*	
	3	1925.5	1925.5*	1.5	CD	140*	120*	
16	3	1504.5		.5	CD	140*	120*	
	3	1550		0.25	CD	210*	140*	
	3	1819	1819.5*	1.5	CD	210*	140*	
	3	1823	1824.5	2.5	CD	47	26	
	3	1859.5		<0.25	CD	52	35	
17	2	1629.5		3	CD	~65		off-scale on linear record
19	3	1927	1927*	1.5	CD	310*	260*	
20	2	1349.5	1351*	3	CD	140*	120*	
	3	1514	1514.5	1.5	CD	~65		off-scale on linear record
24	8	1522		8	ESD	~65		off-scale on linear record
	8	1844	1844.5*	3	CD	180	140*	

* Logarithmic recorder

SOLAR RADIO EMISSION

DAILY DATA

MARCH 1958

BOULDER 167 MC

1958 Mar.	Flux Density 10^{-22} w m^{-2}(c/s)$^{-1}$ Hours UT 0 3	12 15	15 18	18 21	21 24	Day	Variability 0 to 3 Hours UT 0 3	12 15	15 18	18 21	21 24	Day	Observing Periods Hours UT
1	-	-	23	22	-	22	-	-	1	2S	-	1S	15.5-20.5
2	-	-	18	17	18	18	-	-	0	0	1S	0	15.0-24.6
3	-	-	121	29	18	73	-	-	1S	2	2S	2S	14.8-24.6
4	-	-	18	19	19	19	-	0	2S	1S	1S	1S	13.5-19.8,20.3-24.7
5	-	-	20	18	20	19	-	0	1	1	0S	1	13.5-24.7
6	-	-	20	22	20	21	-	0S	1	1S	2S	1S	13.4-24.7
7	-	-	22	25	22	24	-	2	2	2S	2S	2S	13.4-24.7
8	-	-	52	149	384	180	-	2	2	3	3	3	13.4-24.7
9	-	-	79	119	125	108	-	2	2	2	2S	2	13.4-24.7
10	-	-	113	83	83	95	-	2	2	2	2S	2	13.4-24.8
11	-	-	33	40	60	43	-	2	2	2	2S	2	13.3-13.6,14.5-24.8
12	-	-	31	41	33	35	-	1S	1	2	2S	2S	13.3-20.3,20.5-24.8
13	-	-	29	34	32	31	-	1	1	1S	2S	1S	13.8-24.8
14	-	-	24	22	22	23	-	-	1S	1S	1S	1S	15.5-24.8
15	-	-	-	21	19	21	-	1	1S	1S	1S	1S	13.3-14.8,16.3-24.8
16	-	-	17	17	16	17	-	1	0	0	2S	1	13.3-24.8
17	-	-	-	17	16	17	-	1	-	1S	0S	1S	14.1-24.8
18	-	-	18	17	20	18	-	2	1S	0S	1S	1S	13.2-24.8
19	-	-	25	19	20	22	-	2S	2S	2	2S	2S	13.2-24.9
20	-	-	117	158	117	127	-	2	2	2S	2S	2S	13.1-24.9
21	-	-	53	36	58	51	-	2	2	2S	2S	2S	13.1-24.9
22	-	-	28	30	21	26	-	2	2	1	1	2	13.1-24.9
23	-	-	31	21	20	25	-	1	2S	2	2S	2S	13.0-24.9
24	-	-	20	20	24	21	-	2	2S	2S	2S	2S	13.0-01.0
25	-	-	38	43	54	44	-	2	2S	2S	2S	2S	13.0-01.0
26	-	-	74	74	56	65	-	2	2	2	1S	2	13.8-01.0
27	-	-	-	111	92	104	-	2	1S	1S	1S	1S	12.9-01.0
28	-	-	65	62	55	63	-	1	2	2S	2S	2S	12.9-01.0
29	-	-	85	220	84	130	-	-	2S	2	2	2	14.2-01.0
30	-	-	114	50	25	64	-	2	2	2S	2	2	12.8-01.1
31	-	-	24	30	48	33	-	2S	2S	2S	2S	2S	12.8-14.1,15.0-17.5, 18.1-20.8,21.9-01.1

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
MARCH 1958

BOULDER 167 MC

Mar. 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density 10^{-22} w m^{-2}(c/s)$^{-1}$ Inst.	Smooth	Remarks
1	1	1530 B	1812.1	300 D	MF	120	-	Burst 1758.3
3	9	1349	1559.0	191 X	CD	420	160	
3	1	1700 X	1803.3	455 D	MF	1100	-	N2
4	1	1330 B	2434.9	670 D	MF	530	-	
6	1	1325 B	2307.0	675 D	F	770	-	S
7	6	1325 B	1848.8	675 D	CD	400	10	N3
8	6	1325 B	2003.8	675 D	CD	1200	370	Large bursts 1923.1, 1952.2
9	6	1325 B	1453.8	675 D	CD	1300	110	N4
9	2	1433.3	1434.0	00.8	ECD	920	-	
9	2	2049.8	2049.9	00.7	ECD	1200	-	
10	6	1325 B	1929.2	680 D	CD	640	100	N5
11	6	1320 B	2231.0	685 D	CD	770	43	S Large burst 2200.4
12	6	1320 B	1922.0	685 D	CD	540	27	S
13	6	1350 B	1549.5	655 D	CD	190	17	S
14	1	1530 B	1704.7	555 D	MF	95	-	S
15	1	1315 B	1723.5	690 D	MF	170	-	
16	2	2034	2040.4	07	ECD	140	22	
16	3	2330.0	2330.2	01	ECD	360	-	
18	1	1310 B	1625.1	700 D	MF	200	-	S
19	6	1310 B	1918.3	705 D	CD	310	11	S N6
20	6	1305 B	1533.8	710 D	CD	970	140	S N7
21	6	1305 B	1422.6	710 D	CD	670	54	S Large bursts 1355.9,1421.1
22	6	1305 B	2222.3	710 D	CD	430	13	S Large burst 1913.0
22	0	1634	1948.4	22	CD	540	110	S
22	3	1822	1822.3	01	ECD	1500	-	

Notes:
1. Interference may obscure or be mistaken for solar events. Relatively small events are not reported.
2. March 3, Large bursts 1830.2, 2147.3, 2346.0, 2409.8. Bursts 2254.3, 2341.0, 2409.1.
3. March 7, Large burst 1402.3, Burst 1854.7.
4. March 9, Large burst 1354.3, Burst 2119.5.
5. March 10, Bursts 1434.8, 1442.0, 1559.1, 2101.8, 2437.2.
6. March 19, Large bursts 1440.8, 2446.7.
7. March 20, Large bursts 1317.7, 1509.9, 1754.0, 2254.4.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
MARCH 1958

BOULDER 167 MC

Mar. 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density 10^{-22} w $m^{-2}(c/s)^{-1}$ Inst.	Smooth	Remarks
23	6	1300 B	1437.3	405 X	CD	440	16	Large burst 1313.1,1508.6
23	1	1945 X	2152.8	310 X	MF	170	-	Burst 2306.7
24	1	1300 B	1730.3	525 X	MF	750	-	S N8 Burst 2016.7
24	6	2145 X	2315.3	195 X	CD	170	10	S
25	6	1300 B	1414.1	720 D	CD	900	37	S N9
25	3	2434.2	2434.4	1.8	ECD	1400	-	
26	6	1350 B	2308.1	670 D	CD	470	57	Large burst 1522.1
27	6	1255 B	1523.7	725 D	CD	430	100	S Large burst 1417.1
28	6	1255 B	1647.1	725 D	CD	540	55	S Large burst 1818.9,1907.7
29	6	1410 B	1438.6	285 X	CD	1100	96	S
29	9	1855 X	I	182 X	CD	1600	210	S N10
29	6	2157 X	2131.1	183 X	CD	1400	79	
29	3	2135	2135.7	02	ECD	1400	370	
30	6	1250 B	1404.3	130 X	CD	240	53	Large burst 1302.1
30	9	1500 X	1630.4	145 X	CD	860	47	
30	6	1725 X	2322.8	460 X	CD	1400	250	S
30	3	1908	1908.1	01	ECD	1600	-	
30	3	2301.3	2301.9	02	ECD	730	280	
30	3	2322.8	2322.9	00.5	ECD	1400	-	
30	2	2345	2346.1	03	CD	1100	390	
31	6	1250 B	1533.5	735 D	CD	2000 D	30	S N11
31	3	1652	1652.8	02	ECD	1200	390	
31	3	1712.8	1713.4	01.1	CD	1000	-	
31	3	1718.6	1719.4	01.4	ECD	1300	-	
31	2	1936	1936.7	04	ECD	1600	520	

8. March 24, Probable group of bursts occurred 1636-1639. Burst 2016.7
9. March 25, Large bursts 1444.1, 1817.7, 2437.1.
10. March 29, More than 10 large bursts having a flux value of approximately 1600 occurred 1919-1945 any one of which could have been considered the maximum. Also during this period the hourly calibration was taken from 1926-1929.
11. March 31, Large bursts 1302.7, 1332.0, 1712.0. Bursts 1623.0, 1802.1, 2308.5.

SOLAR RADIO EMISSION

DAILY DATA

MARCH 1958

BOULDER 470 MC

Mar. 1958	Flux Density 10^{-22} w m^{-2}(c/s)$^{-1}$ Hours UT 0 3	12 15	15 18	18 21	21 24	Day	Variability 0 to 3 Hours UT 0 3	12 15	15 18	18 21	21 24	Day	Observing Periods Hours UT
1	-	-	79	79	79	79	-	-	1	0	1	1	14.0-23.3,24.0-24.6
2	-	-	78	79	79	79	-	-	0	0	0	0	14.8-24.6
3	-	-	79	79	79	79	-	-	0	1	1	1	14.0-24.6
4	-	-	79	80	80	79	-	0	0	0	0S	0	13.5-24.6
5	-	-	79	80	80	79	-	0	0	1S	0S	0S	13.5-17.0,17.6-24.6
6	-	-	80	80	80	80	-	0	0S	0	0S	0S	13.5-24.7
7	-	-	81	81	81	81	-	0	0	0	0	0	13.4-24.7
8	-	-	81	81	100	87	-	1	0	0	1	0	13.4-24.7
9	-	-	80	80	80	80	-	1S	1	1	0	1	13.4-24.7
10	-	-	79	79	80	79	-	-	0	0	0S	0S	13.7-24.7
11	-	-	79	80	79	79	-	0	0	0	0S	0	13.3-24.8
12	-	-	79	79	79	79	-	-	0	0	0S	0	13.7-20.0,20.2-24.8
13	-	-	79	79	79	79	-	-	0	0	0	0	13.8-24.8
14	-	-	79	79	79	79	-	0S	0S	0S	0S	0S	13.8-24.8
15	-	-	79	79	79	79	-	-	1	0	0	0	13.7-23.0,23.5-24.8
16	-	-	78	77	78	78	-	-	0	1	0	0	13.8-24.8
17	-	-	77	-	78	78	-	-	0	-	0S	0S	14.2-18.0,18.9-20.2,N1
18	-	-	78	78	78	78	-	-	0	0S	0S	0S	14.0-24.8
19	-	-	79	79	79	79	-	-	0S	0S	1S	0S	13.8-24.8
20	-	-	81	81	79	80	-	-	0	0	0	0	13.8-24.8
21	-	-	79	79	79	79	-	-	1	2	0S	1	13.9-24.9
22	-	-	80	80	79	80	-	0	0	1	0S	0	13.1-24.9
23	-	-	79	78	78	79	-	-	1	0	0	0	13.9-24.9
24	-	-	78	79	78	78	-	-	0	0	0S	0	14.0-24.9
25	-	-	79	79	79	79	-	1	1	0S	0S	0S	13.8-24.9
26	-	-	79	79	79	79	-	-	1S	1	1S	1S	13.8-01.0
27	-	-	79	79	-	79	-	-	1	0S	-	1S	13.8-20.4,22.9-01.0
28	-	-	78	78	79	78	-	-	0S	0	0S	0S	13.8-01.0
29	-	-	79	79	78	79	-	2	1	1	2S	2	13.8-01.0
30	-	-	89	79	78	82	-	-	2	1	2	2	13.9-01.1
31	-	-	79	79	79	79	-	0S	1	0S	1	1S	12.8-01.1

Notes: 1. March 17, cont'd. 21.8-24.8.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
MARCH 1958

BOULDER 470 MC

Mar. 1958	Type Ap.J	Start UT	Time of Maximum	Duration Minutes	Type IAU	Max. Flux Density 10^{-22} w $m^{-2}(c/s)^{-1}$ Inst.	Smooth	Remarks
1	3	1338.4	1338.7	00.9	ECD	95	-	S
1	2	2235.4	2235.9	01.8	CD	150	26	Burst 2409.8
3	3	1943.6	1943.6	00.1	ECD	260	-	Burst 2043.9
3	2	2143	2147.1	06	CD	180	23	
3	2	2341	2345.2	05	CD	210	28	
5	2	2038.2	2038.9	00.8	CD	300	-	S
8	0	2200 X	2304	160 X	SD	130	21	Burst 1327
8	3	2234.5	2235.1	00.7	CD	370	-	
9	0	1530 I	1547.6	18 I	CD	110	24	
9	3	1655.5	1655.6	00.5	ECD	260	-	
9	3	2043.7	2043.7	00.1	ECD	420	-	
15	3	1933.0	1933.3	00.4	ECD	400	-	S
16	3	1942.8	1942.9	00.2	ECD	350	-	
19	2	2049.3	2410.1	00.8	CD	340	-	S
20	1	1346 B	1930 X	664 D	M	120	-	S
21	2	1716.8	1718.0	04.3	CD	420	39	
21	2	1940.8	1942.5	04.1	CD	760	130	
22	1	1305 B	1712.7	710 D	M	130	-	S
22	8	1827.5	1846.8	23.5	CD	230	77	
22	0	1904	1914.0	21	SD	110	-	
23	3	1717.1	1717.2	00.2	ECD	380	-	
24	1	1434 X	1502.7	30 X	MF	120	-	
24	1	1843	1930.4	372 D	MF	100	-	S
25	3	1422.0	1422.2	00.3	ECD	170	-	S
26	1	1346 B	2003.3	674 D	MF	160	-	Bursts 1755,2250
27	1	1348 B	2305.3	672 D	MF	370	-	I 2026-2256, Burst 1403.8
27	2	1702	1702.7	04	ECD	370	65	
28	1	1350 B	1547.9	670 D	MF	350	-	S
29	1	1344 B	1820.3	676 D	MF	200	-	N2
29	2	1442	1448.3	08	CD	520	150	
29	2	2125	2136.4	12 I	CD	260	45	
30	1	1354 B	1422.1	96 X	MF	110	-	
30	6	1530 X	1549.3	110 X	MF	420	11	N3
30	1	1720 X	2157.9	465 X	MF	360	-	
30	3	1750.9	1751.1	00.5	ECD	1200	-	
30	3	1907.9	1908.0	00.4	ECD	790	-	
30	2	2008.4	2009.4	04.1	CD	160	37	
30	2	2431.4	2431.7	01.5	CD	1400	390	
31	1	1245 B	1729.7	740 D	MF	280	-	S N4

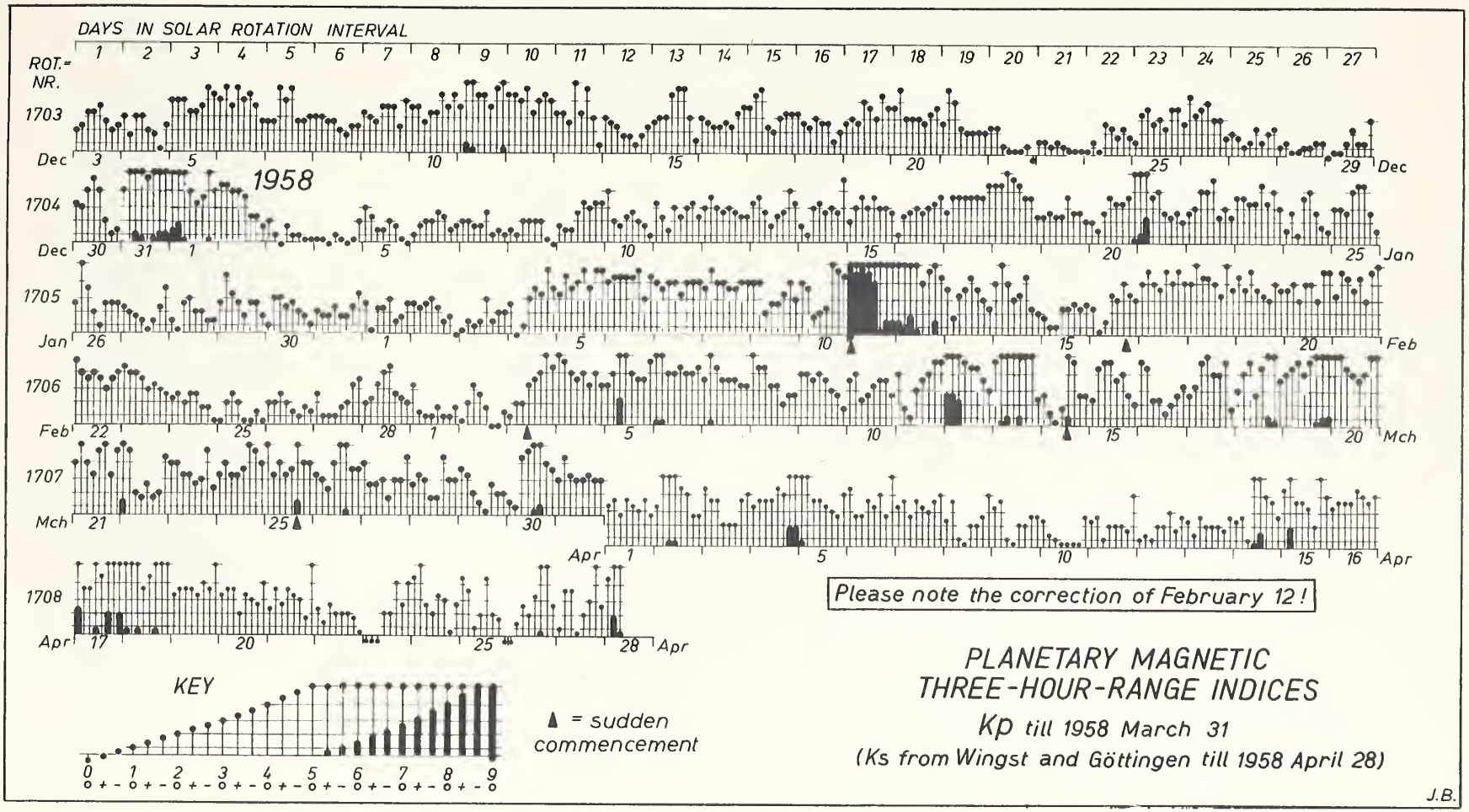
COMMERCE - STANDARDS - BOULDER

Notes: 1. Interference may occasionally obscure or be mistaken for solar events.
2. March 29, Bursts 1651.7, 1704.2, 2312.3, 2420.9, 2427.5, 2429.8, 2452.4, 2500.4.
3. March 30, Bursts 1957.8, 2102.8, 2134.2, 2301.8, 2305.6.
4. March 31, Bursts 1608.4, 1651.9, 2308.3, 2323.7.

GEOMAGNETIC ACTIVITY INDICES

MARCH 1958

Mar. 1958	C	Values Kp — Three hour Gr. interval 1 2 3 4	5 6 7 8	Sum	Ap	Final Selected Days
1	0.3	3+ 1+ 1o 1o	2- 1o 1o 2-	12o	6	Five
2	0.2	1- 2o 3+ 3-	2- 0+ 0+ 1+	12+	7	Quiet
3	1.2	1o 2o 2o 3+	4- 4o 5o 4+	25+	21	
4	1.2	5o 5- 4o 4-	4o 3+ 4o 3+	32o	28	1
5	1.4	3+ 4o 7- 5o	4o 4- 4- 5-	35o	39	2
						16
6	1.4	5+ 5+ 4o 4o	4+ 4o 4o 4+	35+	36	28
7	1.1	4- 5+ 4+ 4-	4- 4- 3+ 3+	31o	26	29
8	1.0	5o 4+ 4+ 3+	3+ 2o 3- 3-	28-	22	
9	1.0	4o 4o 4- 4o	4- 3o 3- 2-	27-	20	
10	0.9	4- 4o 2+ 3-	3+ 4- 4- 3-	26o	18	
11	1.1	4o 2- 1o 3o	4- 4o 5- 5-	27-	22	Five
12	1.6	7o 7o 7- 5-	4+ 4+ 4- 3o	41-	64	Disturbed
13	1.5	5- 5+ 6- 5o	6- 5o 5o 2+	39-	48	
14	1.2	3- 1+ 1- 2-	6- 5- 3- 3-	22o	20	5
15	1.2	2+ 4+ 5- 5-	4- 4o 3- 2o	28+	23	12
						13
16	0.8	5- 4+ 2+ 2+	1+ 2o 3- 3+	23o	16	19
17	1.2	3- 3+ 5- 5o	4o 4o 5- 2-	30o	27	20
18	1.3	3o 4o 5- 3-	4+ 6- 5+ 4-	33+	34	
19	1.5	4o 4+ 5- 4o	5- 5+ 6- 6-	38+	44	
20	1.4	5o 5o 4+ 4o	4- 4o 5o 5o	36o	38	
21	1.3	4o 5o 4o 3+	5- 5o 3+ 5-	34o	33	Ten
22	1.0	6o 5- 2o 2-	3- 2- 2o 4+	25o	24	Quiet
23	1.1	4o 4o 3+ 3+	3- 3o 5- 2+	27+	21	
24	1.2	3+ 4o 3+ 3+	4- 5o 5- 4o	31+	27	1
25	1.4	5o 3+ 4o 3+	4- 6o 4o 4o	33+	33	2
						3
26	1.1	3+ 3o 2+ 4o	5o 5+ 4- 4-	30+	27	10
27	0.9	4o 3- 3- 3o	2- 3o 3o 4+	24+	17	14
28	0.7	3- 3+ 3o 2-	2- 4+ 3o 3o	23-	15	16
29	0.4	4- 3+ 2o 1+	1- 3- 2o 2o	18-	10	27
30	1.3	1+ 1o 4+ 5-	5+ 6- 4o 4-	30o	32	28
31	0.8	3o 4+ 3+ 3o	3o 3+ 3o 3o	26o	18	29
						31
Mean:	1.09			Mean:	26	



COMMERCE – STANDARDS – BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH ATLANTIC

MARCH 1958

Mar. 1958	North Atlantic 6-hourly quality figures				Short-term forecasts issued about one hour in advance of:				Whole day index	Advance forecasts (J-reports) for whole day; issued in advance by:			Geomagnetic K_{Fr}	
	00 to 06	06 to 12	12 to 18	18 to 24	00	06	12	18		1-4 days	4-7 days	8-25 days	Half (1)	Day (2)
1	7°	7+	7°	7+	7	7	7	7	7°	7	7		1	1
2	7°	7°	7°	7°	7	7	7	7	7°	7	7		2	1
3	7-	6+	7+	6+	7	7	7	7	7-	7	7		2	(4)
4	5-	5+	6+	6+	6	5	6	6	6-	6	7		(4)	3
5	6°	5+	7-	7-	6	6	6	6	6+	4	7		(4)	3
6	5+	5°	7°	6+	6	5	6	6	6°	4	7		(5)	3
7	6-	5+	7°	6+	5	5	7	6	6°	6	6		(4)	3
8	6-	5°	7°	7°	5	5	7	6	6+	6	6		(4)	2
9	7-	6+	6+	7-	6	6	7	7	7-	6	6		3	3
10	6+	7-	7-	7-	6	6	7	7	7-	7	6		3	3
11	6+	6+	7-	6+	7	7	7	7	6+	7	7		2	3
12	5-	4+	6-	6-	6	3	5	5	5°	7	7		(6)	3
13	4°	3+	5+	6-	5	4	5	4	(4+)	7	7		(4)	(4)
14	6-	5+	6°	7-	4	5	6	5	6°	5	6		1	(4)
15	7°	6°	6+	7-	5	6	6	6	7-	6	6		3	3
16	7-	7-	7°	7-	6	6	7	7	7-	6	6		3	2
17	7°	6°	7-	7-	7	7	6	7	7-	6	6		(4)	3
18	6°	6°	7-	6-	6	5	6	7	6+	6	5		3	(4)
19	5+	6-	6+	5+	6	4	6	6	6-	6	5		(4)	(4)
20	5+	5°	6°	6-	5	5	6	6	6-	6	5		(4)	3
21	5+	6-	6°	6-	5	5	6	5	6-	5	7		3	(4)
22	5°	6-	6+	7-	5	5	7	6	6-	5	7		3	3
23	6°	*4+	6°	6°	5	6	5	5	*5+	4	7		3	3
24	6+	6°	6+	6-	5	5	6	5	6°	4	7		3	3
25	5+	6°	6°	5°	4	5	6	4	6-	4	5		(4)	(4)
26	5+	6-	5+	5+	4	6	6	5	6-	4	6		3	(4)
27	6+	6°	6-	6-	5	6	6	5	6°	5	6		3	3
28	6+	6°	7-	6+	6	6	6	6	6+	5	5		2	3
29	6+	6+	7-	7-	7	6	7	6	7-	5	5		2	1
30	7°	7-	7-	6+	7	7	5	5	7-	5	5		2	(4)
31	6°	6-	7-	6+	5	5	6	6	6°	6	5		3	3
Score: Quiet Periods					P	12	15	19	13		11	8		
					S	16	12	11	16		11	18		
					U	1	0	1	1		3	4		
					F	1	1	0	1		5	0		
Disturbed Periods					P	0	0	0	0		0	0		
					S	1	2	0	0		0	0		
					U	0	0	0	0		0	0		
					F	0	1	0	0		1	1		

( ) represent disturbed values.

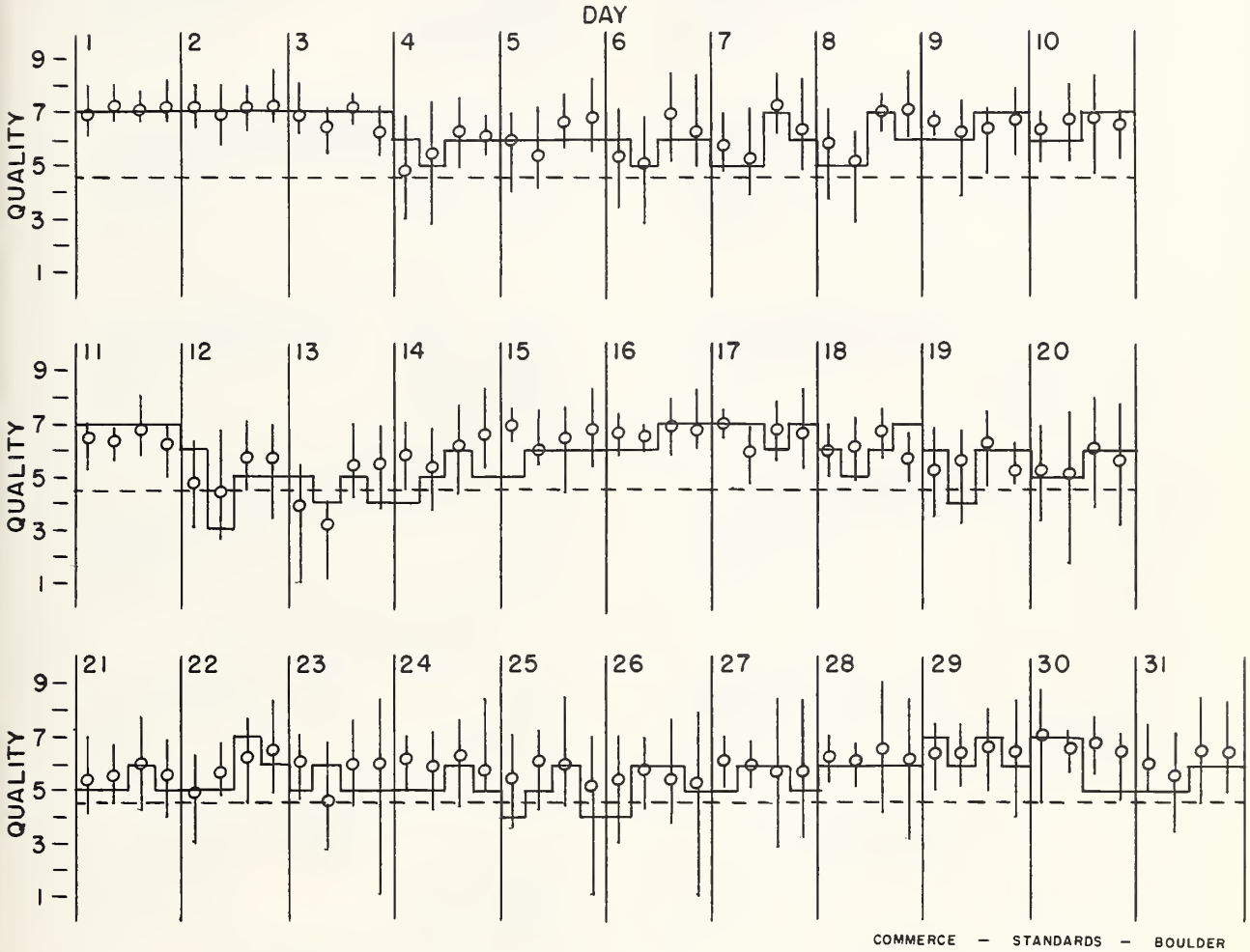
COMMERCE - STANDARDS - BOULDER

* These below normal indices are the result of a particularly severe short-wave fadeout at 0955 U.T., and are not associated with radio or magnetic disturbance.

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS
NORTH ATLANTIC

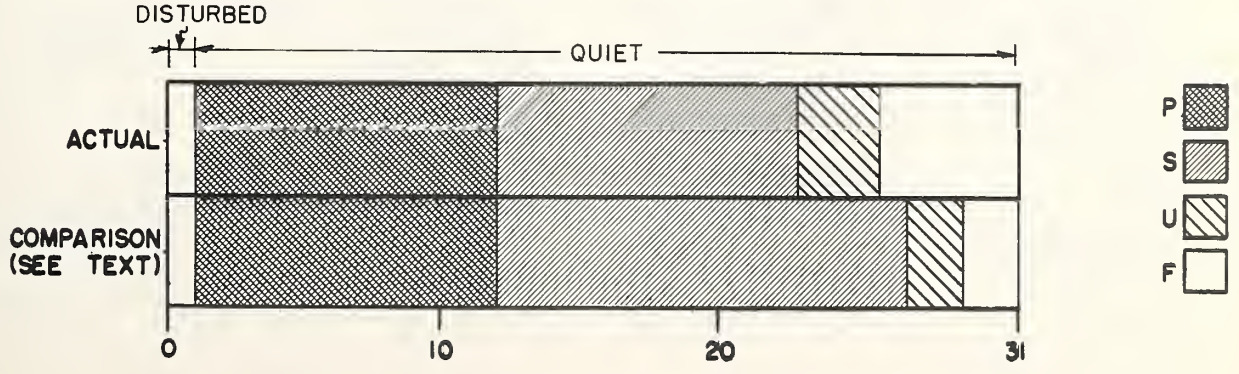
MARCH 1958

— Short-term forecast
o Quality figure
| Range of reports



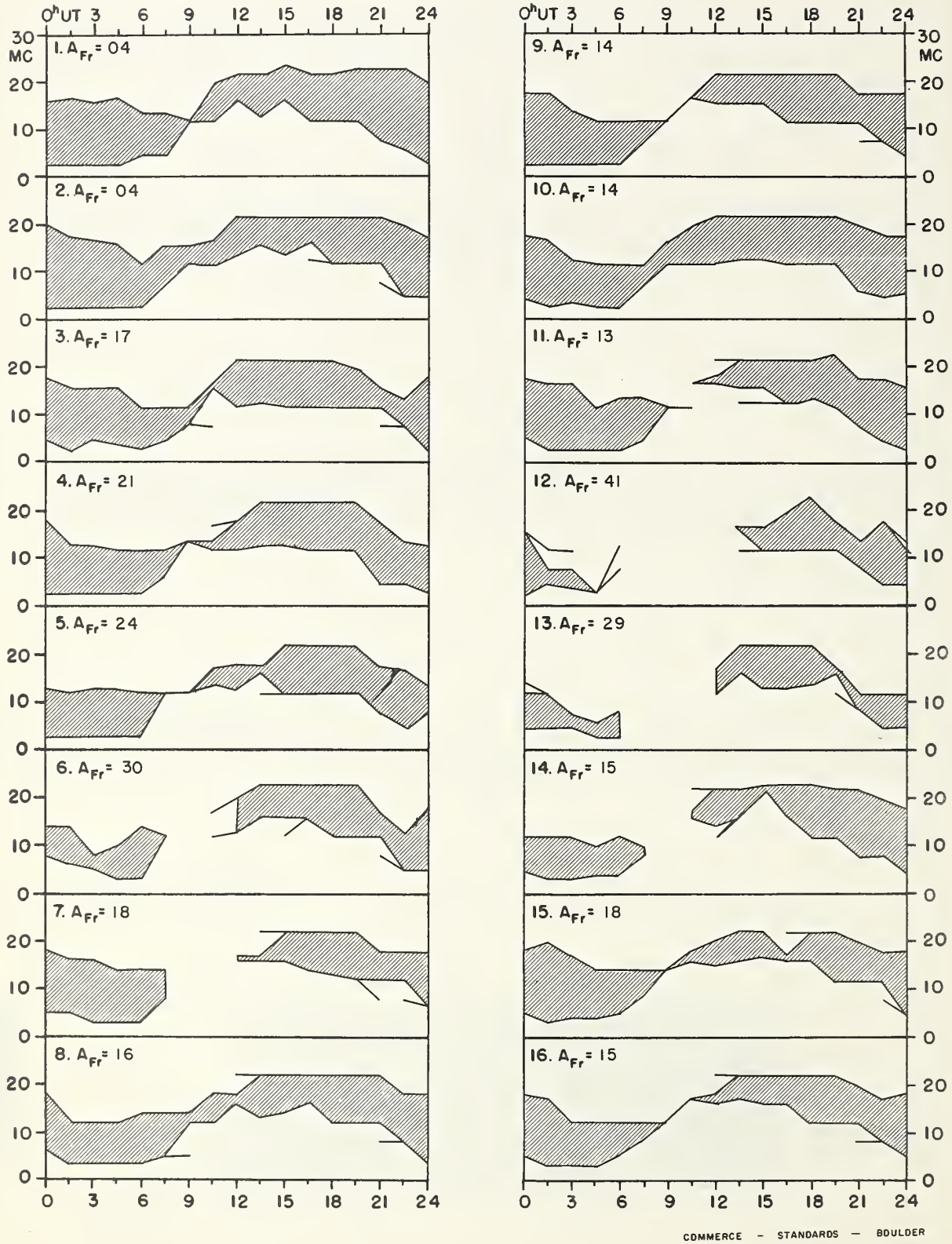
COMMERCE — STANDARDS — BOULDER

OUTCOME OF ADVANCED FORECASTS 1 TO 4 DAYS AHEAD

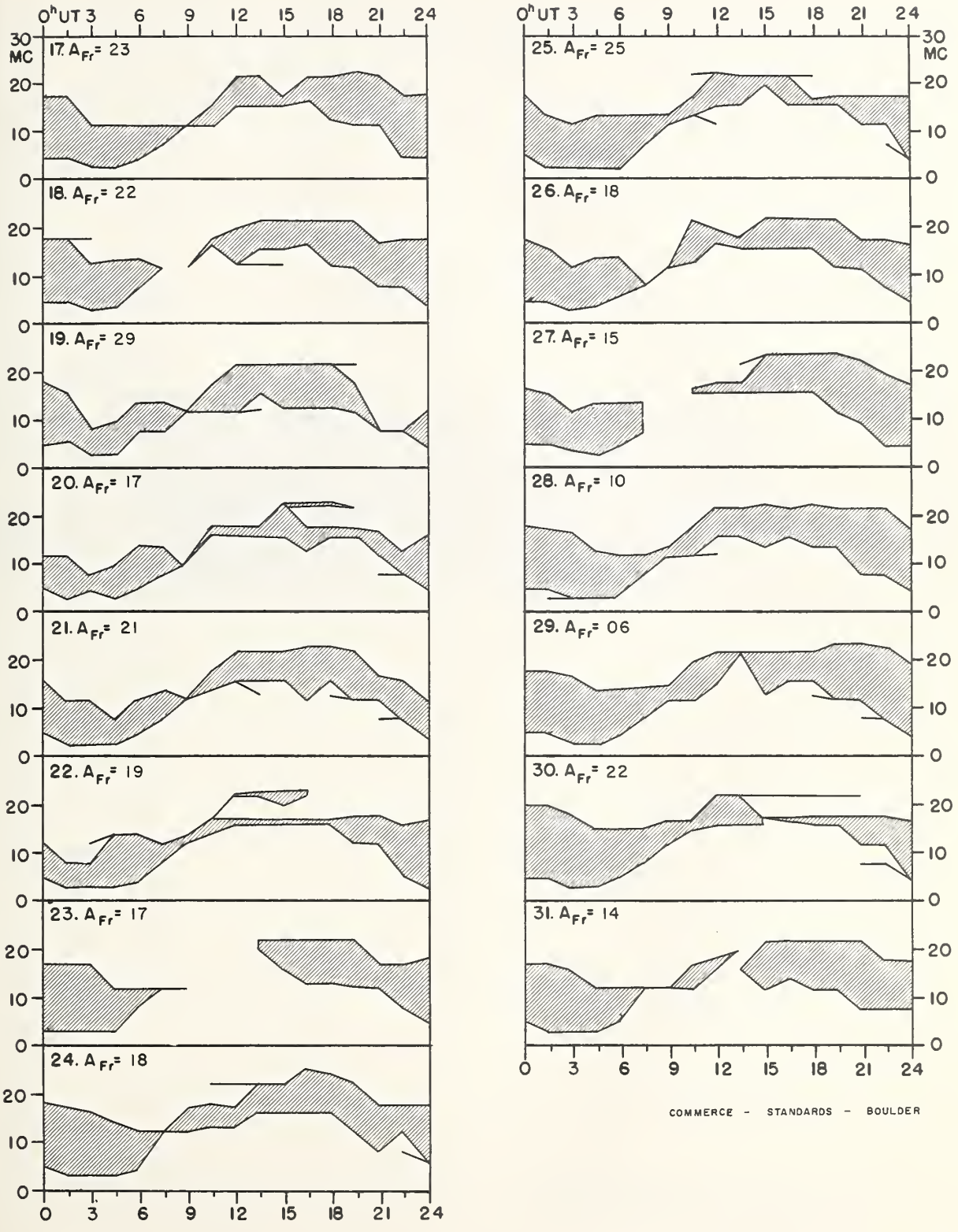


USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

MARCH 1958



MARCH 1958



Adapted from Observations by Deutsches Bundespost

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH PACIFIC

MARCH 1958

Mar. 1958	North Pacific 8-hourly quality figures			Short-term forecasts issued at			Whole day index	Advance forecasts (Jp reports) for whole day; issued in advance by:			Geomagnetic K_{S1}	
	03 to 11	11 to 19	19 to 03	02	10	18		1-4 days	4-7 days	8-25 days	Half Day (1)	Day (2)
1	7	6	7	7	7	6	7	6	7		1	1
2	7	7	7	6	6	6	7	6	7		2	1
3	8	6	6	7	7	6	7	6	7		2	(4)
4	7	6	6	6	5	5	7	7	7		(4)	(4)
5	4	5	5	6	3	5	5	3	7		(5)	(4)
6	5	5	6	6	6	5	5	4	7		(5)	(4)
7	6	6	6	5	5	6	6	5	7		(4)	(4)
8	6	6	6	6	6	6	6	5	6		(4)	2
9	5	5	6	5	6	6	5	6	6		(4)	(4)
10	6	6	6	6	6	5	6	6	6		2	3
11	6	6	6	6	6	6	6	6	6		1	(4)
12	4	4	4	6	5	5	(4)	5	6		(7)	(4)
13	4	2	4	6	4	3	(3)	6	6		(6)	(6)
14	4	5	6	4	5	4	5	6	6		2	(4)
15	6	4	6	5	6	6	5	5	6		(4)	(4)
16	6	6	6	6	5	6	6	6	6		2	2
17	4	4	6	5	3	5	5	6	6		(5)	(4)
18	6	5	5	5	5	5	5	5	6		(4)	(4)
19	4	4	4	5	5	4	5	5	5		(4)	(6)
20	5	6	5	4	5	6	5	5	5		(4)	(4)
21	5	5	6	5	4	5	5	6	5		(4)	(4)
22	5	5	4	4	5	6	5	5	6		2	2
23	6	6	6	5	5	5	6	5	6		(4)	2
24	6	5	5	5	6	4	6	5	6		(4)	3
25	5	4	6	5	5	5	5	5	6		(5)	(4)
26	6	4	6	4	5	5	5	5	6		3	(4)
27	6	6	6	5	4	6	6	5	6		3	2
28	6	6	6	6	6	5	6	5	6		2	2
29	6	6	7	6	5	5	6	5	5		2	1
30	6	5	6	6	5	5	6	5	5		3	(4)
31	6	6	5	5	6	6	6	4	5		3	2

Score:								
Quiet Periods	P	11	9	10		11	15	
	S	13	13	15		16	12	
	U	0	1	1		1	2	
	F	1	1	1		1	0	
Disturbed Periods	P	1	0	1		0	0	
	S	2	5	2		1	0	
	U	0	1	0		0	0	
	F	3	1	1		1	2	

( ) represent disturbed values.

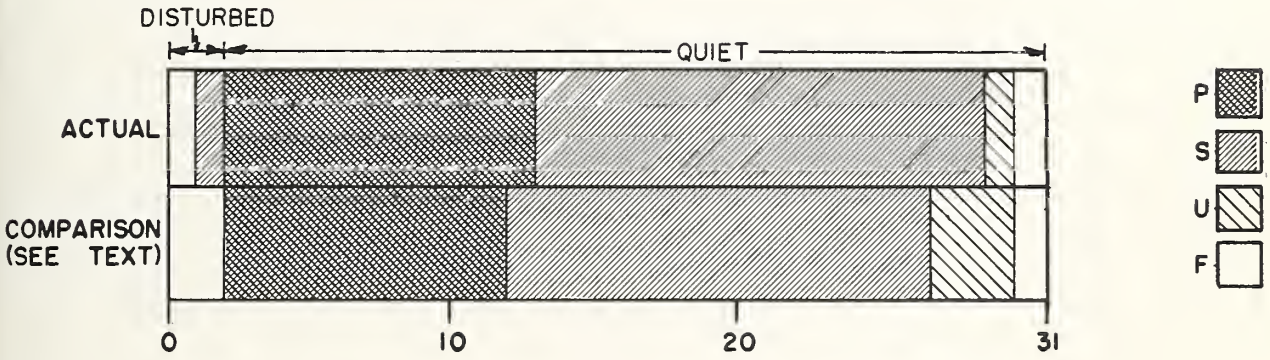
COMMERCE - STANDARDS - BOULDER

CRPL RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

NORTH PACIFIC

MARCH 1958

OUTCOME OF ADVANCED FORECASTS 1 TO 4 DAYS AHEAD



COMMERCE — STANDARDS — BOULDER

ALERT PERIODS AND SPECIAL WORLD INTERVALS

Alert Issued 1600 UT	Ends 1600 UT	SWI	A_{Be} On Days of Alert Period (SWI Underlined)	Number of Flares of IMP ≥ 2 Reported Promptly on Days of Alert Period
1958				
Apr 07	Apr 10		16-11-11-09	1-0-1-1
Apr 30	May 05		23-19-08-06-09-10	1-3-2-1-0-5

COMMERCE — STANDARDS — BOULDER